

# Shenzhen Toby Technology Co., Ltd.

Report No.: TB-FCC151197

1 of 91 Page:

# **FCC Radio Test Report** FCC ID: 2AKURJF-CAM

# **Original Grant**

Report No. TB-FCC151197

Hangzhou Jufeng Technology Co., Ltd. **Applicant** 

**Equipment Under Test (EUT)** 

**EUT Name** WIFI NVR KIT

Model No. JF-IPC-ED2110-IR2-WS

Series No. Please see the page of 4

JF **Brand Name** 

**Receipt Date** 2016-12-15

2016-12-16 to 2017-01-03 **Test Date** 

**Issue Date** 2017-01-04

**Standards** FCC Part 15, Subpart C (15.247:2016)

**Test Method** ANSI C63.10: 2013

**Conclusions PASS** 

In the configuration tested, the EUT complied with the standards specified above,

The EUT technically complies with the FCC and IC requirements

**Test/Witness Engineer** 

Approved&

**Authorized** 

This report details the results of the testing carried out on one sample. The results contained in this test report do not relate to other samples of the same product. The manufacturer should ensure that all products in series production are in conformity with the product sample detailed in the report.

TB-RF-074-1.0

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Page: 2 of 91

# Contents

CON	NTENTS	2
1.	GENERAL INFORMATION ABOUT EUT	4
	1.1 Client Information	4
	1.2 General Description of EUT (Equipment Under Test)	4
	1.3 Block Diagram Showing the Configuration of System Tested	5
	1.4 Description of Support Units	
	1.5 Description of Test Mode	6
	1.6 Description of Test Software Setting	
	1.7 Measurement Uncertainty	
	1.8 Test Facility	
2.	TEST SUMMARY	
3.	TEST EQUIPMENT	10
4.	CONDUCTED EMISSION TEST	11
	4.1 Test Standard and Limit	11
	4.2 Test Setup	
	4.3 Test Procedure	11
	4.4 EUT Operating Mode	
	4.5 Test Data	12
5.	RADIATED EMISSION TEST	17
	5.1 Test Standard and Limit	17
	5.2 Test Setup5.2	18
	5.3 Test Procedure	19
	5.4 EUT Operating Condition	19
	5.5 Test Data	
6.	RESTRICTED BANDS REQUIREMENT	47
	6.1 Test Standard and Limit	47
	6.2 Test Setup	47
	6.3 Test Procedure	47
	6.4 EUT Operating Condition	
	6.5 Test Data	
7.	BANDWIDTH TEST	69
	7.1 Test Standard and Limit	69
	7.2 Test Setup	69
	7.3 Test Procedure	69
	7.4 EUT Operating Condition	
	7.5 Test Data	
8.	PEAK OUTPUT POWER TEST	78
	8.1 Test Standard and Limit	78
	8.2 Test Setup	78



Page: 3 of 91

	8.3 Test Procedure	78
	8.4 EUT Operating Condition	78
	8.5 Test Data	
9.	POWER SPECTRAL DENSITY TEST	82
	9.1 Test Standard and Limit	82
	9.2 Test Setup	82
	9.3 Test Procedure	82
	9.4 EUT Operating Condition	82
	9.5 Test Data	83
10.	ANTENNA REQUIREMENT	91
	10.1 Standard Requirement	91
	10.2 Antenna Connected Construction	



Page: 4 of 91

# 1. General Information about EUT

#### 1.1 Client Information

**Applicant**: Hangzhou Jufeng Technology Co., Ltd.

Address : Building 9, Yinhu Innovation Center, No.9 FuXian Road, YinHu Street,

Hangzhou, Zhejiang, China

**Manufacturer**: Hangzhou Jufeng Technology Co., Ltd.

Address : Building 9, Yinhu Innovation Center, No.9 FuXian Road, YinHu Street,

Hangzhou, Zhejiang, China

# 1.2 General Description of EUT (Equipment Under Test)

<b>EUT Name</b>	2	WIFI NVR KIT			
Models No.		JF-IPC-ED2110-IR2-WS, JF-IPC-EM2wxx-IR8-WA, JF-IPC-EM4wxx-IR8-WP, JF-IPC-ED2wxx-IR2-WA, JF-IPC-ED4wxx-IR2-WP, JF-IPC-BM2wxx-IR2-WP, JF-IPC-HE2wxx-IR2-WP, JF-IPC-HE4wxx-IR2-WP, JF-IPC-EQ2wxx-IR2-WP, JF-IPC-EQ4wxx-IR2-WP, JF-IPC-BS2wxx-IR2-WP, JF-IPC-BS4wxx-IR2-WP, JF-IPC-HS2wxx-IR2-WP, JF-IPC-HS2wxx-IR2-WP, JF-IPC-HS4wxx-IR2-WP, JF-IPC-HS4wxx-IR2-WP, JF-IPC-FC2wxx-IR2-WA,	O-IR2-WS, JF-IPC-EM2wxx-IR8-WS, JF-IPC-EM4wxx-IR8-WS, xx-IR8-WA, JF-IPC-EM4wxx-IR8-WA, JF-IPC-EM2wxx-IR8-WP, xx-IR8-WP, JF-IPC-ED2wxx-IR2-WS, JF-IPC-ED4wxx-IR2-WS, xx-IR2-WA, JF-IPC-ED4wxx-IR2-WP, xx-IR2-WP, JF-IPC-BM2wxx-IR2-WS, JF-IPC-BM4wxx-IR2-WS, xx-IR2-WA, JF-IPC-BM4wxx-IR2-WS, xx-IR2-WP, JF-IPC-HE2wxx-IR2-WS, JF-IPC-HE4wxx-IR2-WP, xx-IR2-WA, JF-IPC-HE4wxx-IR2-WS, xx-IR2-WA, JF-IPC-HE4wxx-IR2-WS, xx-IR2-WA, JF-IPC-EQ2wxx-IR2-WP, xx-IR2-WA, JF-IPC-EQ4wxx-IR2-WS, xx-IR2-WA, JF-IPC-EQ4wxx-IR2-WS, xx-IR2-WA, JF-IPC-BS2wxx-IR2-WP, xx-IR2-WA, JF-IPC-BS4wxx-IR2-WS, xx-IR2-WA, JF-IPC-BS4wxx-IR2-WS, xx-IR2-WA, JF-IPC-HS2wxx-IR2-WP, xx-IR2-WA, JF-IPC-HS2wxx-IR2-WP, xx-IR2-WA, JF-IPC-HS4wxx-IR2-WS, xx-IR2-WA, JF-IPC-HS4wxx-IR2-WS, xx-IR2-WA, JF-IPC-HS4wxx-IR2-WP, xx-IR2-WA, JF-IPC-FC2wxx-IR2-WP, xx-IR2-WA, JF-IPC-FC4wxx-IR2-WP, xx-IR2-WA, JF-IPC-FC2wxx-IR2-WS, xx-IR2-WA, JF-IPC-FC2wxx-IR2-WA, xx-IR2-WA, yx-IR2-WA, y		
		The "w" can be 1、2、3、4 denote different market positioning.  The "xx" can be 10、13、20、30 denote different software configuration.			
Model Difference		All these models are ident	ical in the same PCB layout and electrical circuit, the ositioning and software configuration.		
TUDE		Operation Frequency:	802.11b/g/n(HT20): 2412MHz~2462MHz 802.11n(HT40): 2422MHz~2452MHz		
Product	6	Number of Channel:	802.11b/g/n(HT20):11 channels see note(3) 802.11n(HT40):9 channels see note(3)		
Description		RF Output Power:	802.11b: 18.77 dBm 802.11g: 16.94 dBm		
	67	The state of the s	802.11n (HT20): 15.43 dBm 802.11n (HT40): 15.08 dBm		



Page: 5 of 91

1773	1	Antenna Gain:	5 dBi Dipole Antenna		
3 LOUIS		Modulation Type:	802.11b: DSSS(CCK, DQPSK, DBPSK) 802.11g/n:OFDM(BPSK,QPSK,16QAM, 64QAM)		
TOBY		Bit Rate of Transmitter:	802.11b:11/5.5/2/1 Mbps 802.11g:54/48/36/24/18/12/9/6 Mbps 802.11n:up to 150Mbps		
Power Supply	:	DC power by AC/DC Adap	oter.		
		Input: AC 100~240V,50/60 Output: DC 12.0V, 1A.	0Hz, 0.4A.		
Connecting I/O Port(S)	•	Please refer to the User's	Manual		

#### Note:

- (1) This Test Report is FCC Part 15.247 for 802.11b/g/n, the test procedure follows the FCC KDB 558074 D01 DTS Meas Guidance v03r05.
- (2) For a more detailed features description, please refer to the manufacturer's specifications or the User's Manual.

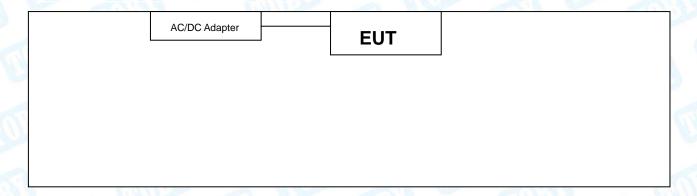
#### (3) Channel List:

Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)	
01	2412	05	2432	09	2452	
02	2417	06	2437	10	2457	
03	2422	07	2442	11	2462	
04	2427	08	2447			
Note:CH 01~CH 11 for 802 11b/g/n(HT20)						

Note:CH 01~CH 11 for 802.11b/g/n(HT20) CH 03~CH 09 for 802.11n(HT40)

- (4) The Antenna information about the equipment is provided by the applicant.
- 1.3 Block Diagram Showing the Configuration of System Tested

  AC Charging with TX Mode





Page: 6 of 91

## 1.4 Description of Support Units

The EUT has been test as an independent unit.

### 1.5 Description of Test Mode

To investigate the maximum EMI emission characteristics generates from EUT, the test system was pre-scanning tested base on the consideration of following EUT operation mode or test configuration mode which possible have effect on EMI emission level. Each of these EUT operation mode(s) or test configuration mode(s) mentioned follow was evaluated respectively.

For Conducted Test					
Final Test Mode	Description				
Mode 1	AC Charging with TX B Mode				

For Radiated Test				
Final Test Mode Description				
Mode 2	TX Mode B Mode Channel 01/06/11			
Mode 3 TX Mode G Mode Channel 01/06/11				
Mode 4 TX Mode N(HT20) Mode Channel 01/06/11				
Mode 5 TX Mode N(HT40) Mode Channel 03/06/09				

#### Note:

(1) For all test, we have verified the construction and function in typical operation. And all the test modes were carried out with the EUT in transmitting operation in maximum power with all kinds of data rate.

According to ANSI C63.10 standards, the measurements are performed at the highest, Middle, lowest available channels, and the worst case data rate as follows:

802.11b Mode: CCK (1 Mbps) 802.11g Mode: OFDM (6 Mbps)

802.11n (HT20) Mode: MCS 0 (6.5 Mbps) 802.11n (HT40) Mode: MCS 0 (13 Mbps)

- (2) During the testing procedure, the continuously transmitting with the maximum power mode was programmed by the customer.
- (3) The EUT is considered a fixed unit; in normal use it was positioned on X-plane. The worst case was found positioned on X-plane. Therefore only the test data of this X-plane was used for radiated emission measurement test.



Page: 7 of 91

# 1.6 Description of Test Software Setting

During testing channel&Power controlling software provided by the customer was used to control the operating channel as well as the output power level. The RF output power selection is for the setting of RF output power expected by the customer and is going to be fixed on the firmware of the final end product power parameters of WLAN.

Test Software Version		N/A	
Channel	CH 01	CH 06	CH 11
IEEE 802.11b DSSS	DEF	DEF	DEF
IEEE 802.11g OFDM	DEF	DEF	DEF
IEEE 802.11n (HT20)	DEF	DEF	DEF
Channel	CH 03	CH 06	CH 09
IEEE 802.11n (HT40)	DEF	DEF	DEF

# 1.7 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 %.

Test Item	Parameters	Expanded Uncertainty (U <sub>Lab</sub> )
	Level Accuracy:	WY DESCRIPTION OF THE PROPERTY
Conducted Emission	9kHz~150kHz	±3.42 dB
	150kHz to 30MHz	±3.42 dB
Dedicted Engineer	Level Accuracy:	. 4 CO dD
Radiated Emission	9kHz to 30 MHz	±4.60 dB
Dedicted Emission	Level Accuracy:	. 4 40 dD
Radiated Emission	30MHz to 1000 MHz	±4.40 dB
Radiated Emission	Level Accuracy:	±4.20 dB
Radiated Emission	Above 1000MHz	±4.20 UB



Page: 8 of 91

## 1.8 Test Facility

The testing report were performed by the Shenzhen Toby Technology Co., Ltd., in their facilities located at 1A/F., Bldg.6, Yusheng Industrial Zone, The National Road No.107 Xixiang Section 467, Xixiang, Bao'an, Shenzhen, Guangdong, China. At the time of testing, the following bodies accredited the Laboratory:

#### **CNAS (L5813)**

The Laboratory has been accredited by CNAS to ISO/IEC 17025: 2005 General Requirements for the Competence of Testing and Calibration Laboratories for the competence in the field of testing. And the Registration No.: CNAS L5813.

#### FCC List No.: (811562)

The Laboratory is listed in the United States of American Federal Communications Commission (FCC), and the registration number is 811562.

#### IC Registration No.: (11950A-1)

The Laboratory has been registered by Certification and Engineering Bureau of Industry Canada for radio equipment testing. The site registration: Site# 11950A-1.



Page: 9 of 91

# 2. Test Summary

	FCC Part	: 15 Subpart C(15.247)/ RSS 247	Issue 1		
Standa	rd Section	Test Item	ludament	Remark	
FCC	IC	rest item	Judgment	Remark	
15.203	1	Antenna Requirement	PASS	N/A	
15.207	RSS-GEN 7.2.4	Conducted Emission	PASS	N/A	
15.205	RSS-GEN 7.2.2	Restricted Bands	PASS	N/A	
15.247(a)(2)	RSS 247 5.2 (1)	6dB Bandwidth	PASS	N/A	
15.247(b)	RSS 247 5.4 (4)	Peak Output Power	PASS	N/A	
15.247(e)	RSS 247 5.2 (2)	Power Spectral Density	PASS	N/A	
15.247(d)	RSS 247 5.5	Band Edge	PASS	N/A	
15.247(d)& 15.209	RSS 247 5.5	Transmitter Radiated Spurious Emission	PASS	N/A	

Note: "/" for no requirement for this test item.

N/A is an abbreviation for Not Applicable.



Page: 10 of 91

# 3. Test Equipment

Conducte	d Emission Te	st			
Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Cal. Due Date
EMI Test Receiver	Rohde & Schwarz	ESCI	100321	Jul. 22, 2016	Jul. 21, 2017
RF Switching Unit	Compliance Direction Systems Inc	RSU-A4	34403	Jul. 22, 2016	Jul. 21, 2017
AMN	SCHWARZBECK	NNBL 8226-2	8226-2/164	Jul. 22, 2016	Jul. 21, 2017
LISN	Rohde & Schwarz	ENV216	101131	Jul. 22, 2016	Jul. 21, 2017
Radiation	Emission Tes	t			
Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Cal. Due Date
Spectrum Analyzer	Agilent	E4407B	MY45106456	Jul. 22, 2016	Jul. 21, 2017
EMI Test Receiver	Rohde & Schwarz	ESPI	100010/007	Jul. 22, 2016	Jul. 21, 2017
Bilog Antenna	ETS-LINDGREN	3142E	00117537	Mar. 20, 2016	Mar. 19, 2017
Bilog Antenna	ETS-LINDGREN	3142E	00117542	Mar. 20, 2016	Mar. 19, 2017
Horn Antenna	ETS-LINDGREN	3117	00143207	Mar. 19, 2016	Mar. 18, 2017
Horn Antenna	ETS-LINDGREN	3117	00143209	Mar. 19, 2016	Mar. 18, 2017
Loop Antenna	Laplace instrument	RF300	0701	Mar. 19, 2016	Mar. 18, 2017
Pre-amplifier	Sonoma	310N	185903	Mar. 20, 2016	Mar. 19, 2017
Pre-amplifier	HP	8447B	3008A00849	Mar. 26, 2016	Mar. 25, 2017
Cable	HUBER+SUHNER	100	SUCOFLEX	Mar. 26, 2016	Mar. 25, 2017
Positioning Controller	ETS-LINDGREN	2090	N/A	N/A	N/A
Antenna (	Conducted Em	ission			
Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Cal. Due Date
Spectrum Analyzer	Agilent	E4407B	MY45106456	Jul. 22, 2016	Jul. 21, 2017
Spectrum Analyzer	Rohde & Schwarz	ESCI	100321	Jul. 22, 2016	Jul. 21, 2017
Power Meter	Anritsu	ML2495A	25406005	Jul. 22, 2016	Jul. 21, 2017
Power Sensor	Anritsu	ML2411B	25406005	Jul. 22, 2016	Jul. 21, 2017



Page: 11 of 91

# 4. Conducted Emission Test

#### 4.1 Test Standard and Limit

4.1.1Test Standard FCC Part 15.207

#### 4.1.2 Test Limit

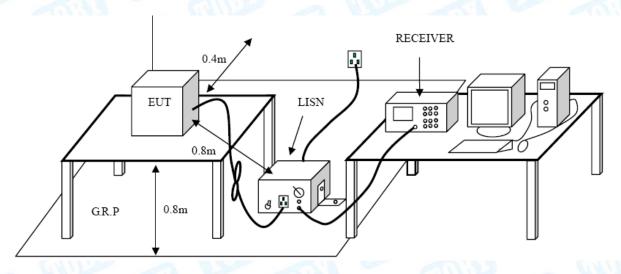
#### **Conducted Emission Test Limit**

- TOTAL - TOTA	Maximum RF Line Voltage (dBμV)		
Frequency	Quasi-peak Level	Average Level	
150kHz~500kHz	66 ~ 56 *	56 ~ 46 *	
500kHz~5MHz	56	46	
5MHz~30MHz	60	50	

#### Notes:

- (1) \*Decreasing linearly with logarithm of the frequency.
- (2) The lower limit shall apply at the transition frequencies.
- (3) The limit decrease in line with the logarithm of the frequency in the range of 0.15 to 0.50MHz.

### 4.2 Test Setup



#### 4.3 Test Procedure

The EUT was placed 0.8 meters from the horizontal ground plane with EUT being connected to the power mains through a line impedance stabilization network (LISN). All other support equipments powered from additional LISN(s). The LISN provide 50 Ohm/50uH of coupling impedance for the measuring instrument.

Interconnecting cables that hang closer than 40 cm to the ground plane shall be folded back and forth in the center forming a bundle 30 to 40 cm long.



Page: 12 of 91

I/O cables that are not connected to a peripheral shall be bundled in the center. The end of the cable may be terminated, if required, using the correct terminating impedance. The overall length shall not exceed 1 m.

LISN at least 80 cm from nearest part of EUT chassis.

The bandwidth of EMI test receiver is set at 9kHz, and the test frequency band is from 0.15MHz to 30MHz.

## 4.4 EUT Operating Mode

Please refer to the description of test mode.

#### 4.5 Test Data

Please see the next page.



Report No.: TB-FCC151197
Page: 13 of 91

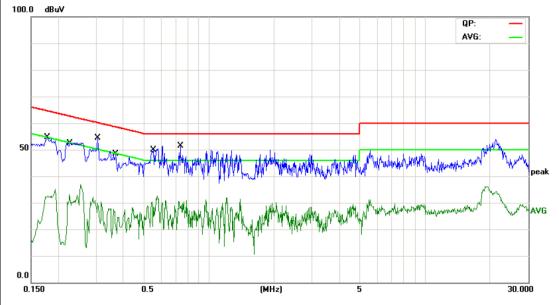
EUT:	WIFL	NVR KIT	Model	Name :	JF-IP	C-ED211	0-IR2-WS
Temperature:	25 ℃		Relativ	e Humidity:	55%		
Test Voltage:	AC 12	20V/60Hz		1	63	11:33	
Terminal:	Line		A KILL		1 6		THE STATE OF
Test Mode:	AC CI	harging with	TX B Mode		2		N. C.
Remark:	Only	worse case is	reported	The same of the sa	ani'	33	
100.0 dBuV							
						QP: AVG:	
50			photophy photophy production of the		rasha dan da	and de south marker by	peak
0.0	0.5		(MHz)	5			30.000
	0.5						30.000
	Freq.	Reading Level	(MHz)  Correct Factor	Measure- ment	Limit	Over	30.000
0.150		Reading	Correct	Measure-	Limit dBuV	Over	30.000 Detector
0.150 No. Mk.	Freq.	Reading Level	Correct Factor	Measure- ment			
0.150 No. Mk.	Freq.	Reading Level	Correct Factor	Measure- ment	dBuV	dB	Detector

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure- ment	Limit	Over	
		MHz	dBu∀	dB	dBu∀	dBu∀	dB	Detector
1		0.1860	49.33	9.99	59.32	64.21	-4.89	QP
2		0.1860	40.77	9.99	50.76	54.21	-3.45	AVG
3		0.2460	48.74	10.02	58.76	61.89	-3.13	QP
4		0.2460	36.22	10.02	46.24	51.89	-5.65	AVG
5	*	0.3060	47.26	10.02	57.28	60.08	-2.80	QP
6		0.3060	32.65	10.02	42.67	50.08	-7.41	AVG
7		0.3500	41.82	10.02	51.84	58.96	-7.12	QP
8		0.3500	32.74	10.02	42.76	48.96	-6.20	AVG
9		0.4900	40.24	10.02	50.26	56.17	-5.91	QP
10		0.4900	30.24	10.02	40.26	46.17	-5.91	AVG
11		0.7380	39.61	10.11	49.72	56.00	-6.28	QP
12		0.7380	28.49	10.11	38.60	46.00	-7.40	AVG



Report No.: TB-FCC151197
Page: 14 of 91

EUT:	WIFI NVR KIT	Model Name : JF-IPC-ED2110-IF					
Temperature:	25 ℃	Relative Humidity: 55%					
Test Voltage:	AC 120V/60Hz						
Terminal:	Neutral	THE PARTY OF THE P					
Test Mode:	AC Charging with TX	( B Mode					
Remark:	Only worse case is re	eported	m:13				
100.0 dBuV							
			QP: — AVG: —				



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure- ment	Limit	Over	
		MHz	dBu∀	dB	dBu∀	dBu∀	dB	Detector
1		0.1780	47.18	9.98	57.16	64.57	-7.41	QP
2		0.1780	39.78	9.98	49.76	54.57	-4.81	AVG
3		0.2300	44.18	10.02	54.20	62.45	-8.25	QP
4	*	0.2300	39.24	10.02	49.26	52.45	-3.19	AVG
5		0.3060	46.77	10.02	56.79	60.08	-3.29	QP
6		0.3060	36.30	10.02	46.32	50.08	-3.76	AVG
7		0.3700	40.72	10.02	50.74	58.50	-7.76	QP
8		0.3700	30.61	10.02	40.63	48.50	-7.87	AVG
9		0.5500	36.24	10.04	46.28	56.00	-9.72	QP
10		0.5500	30.33	10.04	40.37	46.00	-5.63	AVG
11		0.7380	38.15	10.11	48.26	56.00	-7.74	QP
12		0.7380	29.53	10.11	39.64	46.00	-6.36	AVG



15 of 91 Page:



EUT:	WIFI NVR KIT	Model Na	ame :	JF-IF	PC-ED21	10-IR2-W		
Temperature:	25 ℃	<b>Relative Humidity:</b> 55%						
Test Voltage:	AC 240V/60Hz			an se				
Terminal:	Line	A PROPERTY.	100					
Test Mode:	AC Charging wi	th TX B Mode	CALL DE					
Remark:	Only worse case	e is reported	1000		33			
100.0 dBuV								
					QP: AVG:	_		
Xmm X								
50	Million who when when July	it with war	Man Jan Manner	and the second	Maril 1984			
	To the de late of a south	LI (VIV) PAURINI LINIVA	7		my ham when you	peal		
17 W'W'W	ON MARK IN A SHIP WAR	المراهدين المحارة	والمراوات المراوات المراوات المراوات	hallore your	Ar. Munin	, "Ny"		
1 1	II M. di III in	A Linguis production also desired	Add Mark in	, de de	A MANAGEMENT	AVG		
	11 111	U V				w.w		
0.0								
0.150	0.5	(MHz)	5			30.000		
0.150	Reading	g Correct	Measure-			30.000		
0.150 No. Mk. F	Reading Freq. Level	g Correct Factor	Measure- ment	Limit	Over			
0.150 No. Mk. F	Reading Freq. Level	g Correct Factor	Measure- ment	dBuV	dB	Detector		
0.150  No. Mk. F	Reading Freq. Level MHz dBuV 1758 50.22	Correct Factor dB 9.97	Measure- ment dBuV 60.19	dBu∨ <b>64.68</b>	dB -4.49	Detector QP		
0.150  No. Mk. F  1 0.6 2 0.6	Reading Level MHz dBuV 1758 50.22 1758 36.16	Correct Factor dB 9.97 9.97	Measure- ment dBuV 60.19 46.13	dBu∨ 64.68 54.68	dB -4.49 -8.55	Detector QP AVG		
0.150  No. Mk. F  1 0.7 2 0.7 3 0.2	Reading Level MHz dBuV 1758 50.22 1758 36.16 2816 44.35	9.97 9.97	Measure- ment dBuV 60.19 46.13 54.37	dBuV 64.68 54.68 60.77	dB -4.49 -8.55 -6.40	Detector QP AVG QP		
0.150  No. Mk. F  1 0.7 2 0.7 3 0.2 4 0.2	Reading Level MHz dBuV 1758 50.22 1758 36.16 2816 44.35 2816 38.64	9.97 9.97 10.02	Measure- ment dBuV 60.19 46.13 54.37 48.66	dBuV 64.68 54.68 60.77 50.77	dB -4.49 -8.55 -6.40 -2.11	Detector QP AVG QP AVG		
0.150  No. Mk. F  1 0.7 2 0.7 3 0.2 4 0.2 5 * 0.3	Reading Level MHz dBuV 1758 50.22 1758 36.16 2816 44.35 2816 38.64 3790 46.20	G Correct Factor dB 9.97 9.97 10.02 10.02	Measure- ment dBuV 60.19 46.13 54.37 48.66 56.22	dBuV 64.68 54.68 60.77 50.77	-4.49 -8.55 -6.40 -2.11 -2.08	Detector QP AVG QP AVG		
0.150  No. Mk. F  1 0.7  2 0.7  3 0.2  4 0.2  5 * 0.3  6 0.3	Reading Level MHz dBuV 1758 50.22 1758 36.16 2816 44.35 2816 38.64 3790 46.20	9 Correct Factor dB 9.97 9.97 10.02 10.02 10.02	Measure- ment dBuV 60.19 46.13 54.37 48.66 56.22 37.52	dBuV 64.68 54.68 60.77 50.77 58.30 48.30	dB -4.49 -8.55 -6.40 -2.11 -2.08 -10.78	Detector QP AVG QP AVG QP AVG		
0.150  No. Mk. F  1 0.7  2 0.7  3 0.2  4 0.2  5 * 0.3  6 0.3	Reading Level MHz dBuV 1758 50.22 1758 36.16 2816 44.35 2816 38.64 3790 46.20	G Correct Factor dB 9.97 9.97 10.02 10.02	Measure- ment  dBuV  60.19  46.13  54.37  48.66  56.22  37.52	dBuV 64.68 54.68 60.77 50.77	-4.49 -8.55 -6.40 -2.11 -2.08	Detector QP AVG QP AVG		
0.150  No. Mk. F  1 0.7 2 0.7 3 0.2 4 0.2 5 * 0.3 6 0.3 7 0.8	Reading Level MHz dBuV 1758 50.22 1758 36.16 2816 44.35 2816 38.64 3790 46.20	9 Correct Factor dB 9.97 9.97 10.02 10.02 10.02	Measure- ment  dBuV  60.19  46.13  54.37  48.66  56.22  37.52  51.42	dBuV 64.68 54.68 60.77 50.77 58.30 48.30	dB -4.49 -8.55 -6.40 -2.11 -2.08 -10.78	Detector QP AVG QP AVG QP AVG		
0.150  No. Mk. F  1 0.7 2 0.7 3 0.2 4 0.2 5 * 0.3 6 0.3 7 0.8 8 0.8	Reading Level MHz dBuV 1758 50.22 1758 36.16 2816 44.35 2816 38.64 3790 46.20 3790 27.50 8578 41.33	9.97 9.97 9.97 10.02 10.02 10.02 10.02	Measure-ment  dBuV  60.19  46.13  54.37  48.66  56.22  37.52  51.42  34.90	dBuV 64.68 54.68 60.77 50.77 58.30 48.30	dB -4.49 -8.55 -6.40 -2.11 -2.08 -10.78 -4.58	Detector QP AVG QP AVG QP AVG QP		
0.150  No. Mk. F  1 0.7 2 0.7 3 0.2 4 0.2 5 * 0.3 6 0.3 7 0.8 8 0.8 9 1.8	Reading Level MHz dBuV 1758 50.22 1758 36.16 2816 44.35 2816 38.64 3790 46.20 3790 27.50 8578 41.33	9 Correct Factor dB 9.97 9.97 10.02 10.02 10.02 10.02 10.02 10.09	Measure-ment  dBuV  60.19  46.13  54.37  48.66  56.22  37.52  51.42  34.90  51.64	dBuV 64.68 54.68 60.77 50.77 58.30 48.30 56.00 46.00	dB -4.49 -8.55 -6.40 -2.11 -2.08 -10.78 -4.58 -11.10	Detector QP AVG QP AVG QP AVG AVG		
0.150  No. Mk. F  1 0.7 2 0.7 3 0.2 4 0.2 5 * 0.3 6 0.3 7 0.8 8 0.8 9 1.8	Reading Level MHz dBuV 1758 50.22 1758 36.16 2816 44.35 2816 38.64 3790 46.20 3790 27.50 8578 41.33 8578 24.81 5740 41.58	9 Correct Factor dB 9.97 9.97 10.02 10.02 10.02 10.02 10.09 10.09	Measure-ment  dBuV  60.19  46.13  54.37  48.66  56.22  37.52  51.42  34.90  51.64  32.59	dBuV 64.68 54.68 60.77 50.77 58.30 48.30 56.00 46.00	dB -4.49 -8.55 -6.40 -2.11 -2.08 -10.78 -4.58 -11.10 -4.36	Detector QP AVG QP AVG QP AVG QP AVG QP AVG		



16 of 91 Page:

EUT:	WIFI NVR KIT	Model	Name :	JF-IPC-E	D2110-IR2-WS		
Temperature:	25 ℃	Relative	e Humidity:	55%	J. Film		
Test Voltage:	AC 240V/60Hz		1	(Mm)	33		
Terminal:	Neutral						
Test Mode:	AC Charging with TX B Mode						
Remark:	Only worse case is	reported	California (	THE P			
100.0 dBuV							
					QP: — AVG: —		
X					×		
50	Mary Mary Mary Mary Mary Mary Mary Mary	المرابع المراب	Markett Mark	hander harman			
My My 1m	10 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	Mary Marie	, who distribility	wanta wa u ilikata Marada	peak		
	This is a second of the second se		May water the second	godfar er sagraf	MANG AVG		
/ W V	4. 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	Liller and the	, MA, 1164, MA,		",		
		'					
0.0							
0.150	0.5	(MHz)	5		30.000		
	Reading		Measure-	Limeit O			
No. Mk.	Freq. Level	Factor	mone		ver		
	MHz dBuV	dB			dB Detector		
	.3059 47.48	10.02	57.50	60.08 -2.	58 QP		
2 0.	.3059 36.35	10.02	46.37	50.08 -3.	71 AVG		
3 0.	.6097 44.90	10.07	54.97	56.00 -1.	03 QP		
4 0.	.6097 32.60	10.07	42.67	46.00 -3.	33 AVG		
5 * 0.	.7378 44.87	10.11	54.98	56.00 -1.	02 QP		
6 0.	.7378 29.56	10.11	39.67	46.00 -6.	33 AVG		
7 2.	.9420 43.06	10.03	53.09	56.00 -2.	91 QP		
8 2.	.9420 30.34	10.03	40.37	46.00 -5.			
	.4897 39.67	9.98		60.00 -10			
	.4897 30.69	9.98		50.00 -9.			
	.2576 43.69	10.16		60.00 -6.			
12 21.	.2576 32.51	10.16	42.67	50.00 -7.	33 AVG		
Emission Level	= Read Level+ Corre	ect Factor					



Page: 17 of 91

# 5. Radiated Emission Test

## 5.1 Test Standard and Limit

5.1.1 Test Standard FCC Part 15.209

5.1.2 Test Limit

### Radiated Emission Limits (9 kHz~1000 MHz)

Frequency (MHz	Field Strength (microvolt/meter)	Measurement Distance (meters)
0.009~0.490	2400/F(KHz)	300
0.490~1.705	24000/F(KHz)	30
1.705~30.0	30	30
30~88	100	3
88~216	150	3
216~960	200	3
Above 960	500	3

# Radiated Emission Limit (Above 1000MHz)

Frequency	Distance Mo	eters (at 3m)
(MHz)	Peak (dBuV/m)	Average (dBuV/m)
Above 1000	74	54

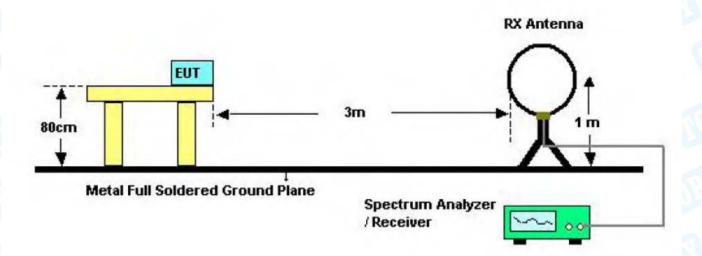
#### Note:

- (1) The tighter limit applies at the band edges.
- (2) Emission Level(dBuV/m)=20log Emission Level(uV/m)

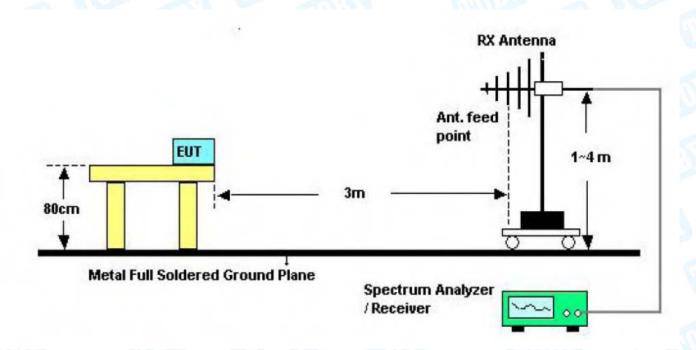


Page: 18 of 91

# 5.2 Test Setup



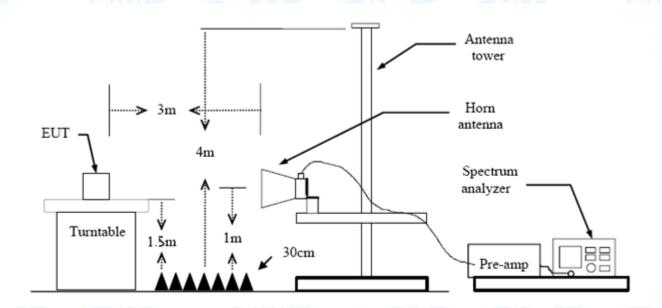
Below 30MHz Test Setup



Below 1000MHz Test Setup



Page: 19 of 91



Above 1GHz Test Setup

#### 5.3 Test Procedure

- (1) Measurements at frequency above 1GHz. The EUT was placed on a rotating 1.5m high above the ground. RF absorbers covered the ground plane with a minimum area of 3.0m by 3.0m between the EUT and measurement receiver antenna. The RF absorber shall not exceed 30cm in high above the conducting floor. The table was rotated 360 degrees to determine the position of the highest radiation.
- (2) The Test antenna shall vary between 1m and 4m, Both Horizontal and Vertical antenna are set to make measurement.
- (3) The initial step in collecting conducted emission data is a spectrum analyzer peak detector mode pre-scanning the measurement frequency range. Significant peaks are then marked and then Quasi Peak detector mode re-measured.
- (4) If the Peak Mode measured value compliance with and lower than Quasi Peak Mode Limit Bellow 1 GHz, the EUT shall be deemed to meet QP Limits and then no additional QP Mode measurement performed. But the Peak Value and average value both need to comply with applicable limit above 1 GHz.
- (5) Testing frequency range below 1GHz the measuring instrument use VBW=120 kHz with Quasi-peak detection.
- (6) Testing frequency range above 1GHz the measuring instrument use RBW=1 MHz and VBW=3 MHz with Peak Detector for Peak Values, and use RBW=1 MHz and VBW=10 Hz with Peak Detector for Average Values.
- (7) For the actual test configuration, please see the test setup photo.

# 5.4 EUT Operating Condition

The Equipment Under Test was set to Continual Transmitting in maximum power.



Page: 20 of 91

## 5.5 Test Data

Remark: During testing above 1GHz the measuring instrument use RBW=1 MHz and VBW=3 MHz with Peak Detector for Peak Values, and use RBW=1 MHz and VBW=10 Hz with Peak Detector for Average Values.

Test data please refer the following pages.



Page: 21 of 91

#### 9KHz~30MHz

From 9KHz to 30MHz: Conclusion: PASS

Note: The amplitude of spurious emissions which are attenuated by more than 20dB below the permissible value has no need to be reported.

## 30MHz~1GHz

EUT:	WIFI NVR KIT	Model:	JF-IPC	-ED2110-IR2-	WS
Temperature:	25 ℃	Relative Humic	lity: 55%	A Leave	I
Test Voltage:	AC 120V/60Hz	WILLIAM TO THE STATE OF THE STA	DATE:		
Ant. Pol.	Horizontal	ET THE		COUNTY OF	
Test Mode:	TX B Mode 2412M	lHz		Value (	d
Remark:	Only worse case is	reported	MILL ST		
80.0 dBuV/m					
			(RF)FCC 150	C 3M Radiation Margin -6 dB	
30 1 No. of the second of the	3 M. M. M	maraya Marana		Mary Mary Mary	
-20 30.000 40	50 60 70 80	(MHz)	300 400 500	0 600 700 1000	) ).00
No. Mk.	Reading Freq. Level	Correct Measur Factor ment	e- Limit	Over	
	MHz dBuV	dB/m dBuV/n	n dBuV/m	dB Dete	ecto
1 34	1.2760 48.61	-16.78 31.83	40.00	-8.17 pe	al
2 87	7.4175 54.74	-22.89 31.85	40.00	-8.15 pe	al
3 10	7.8876 57.40	-21.86 35.54	43.50	-7.96 pe	al
4 * 37	0.7022 54.52	-14.02 40.50	46.00	-5.50 pe	al
5 43	2.5457 50.64	-12.30 38.34	46.00	-7.66 pe	al
	1.1349 49.54	-11.93 37.61		-8.39 pe	
*:Maximum data			10.00	5.55 pc	



Page: 22 of 91

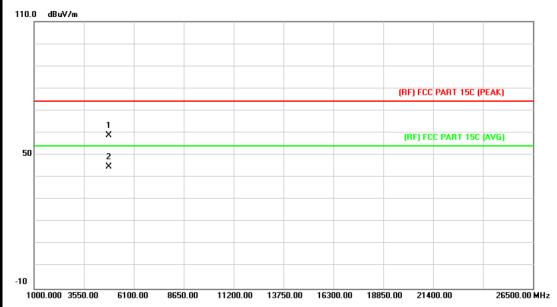
25 ℃				31 -11-0-1	ED2110-IR2-V
		Relativ	e Humidity:	55%	a Will
AC 120	0V/60Hz			(IIII)	33
Vertica	ıl	ARIE	- 31	1	TATA!
TXBN	Mode 2412MI	Hz	MID		HALL
Only w	orse case is	reported			3
The white with	Market and the second s	Mul	ar lawa hadda da	(RF)FCC 15C :	3M Radiation Margin -6 dB  4 5 6  X X X
60 70 8	BO	(MHz)	300	400 500	600 700 1000.
eq.	•		Measure- ment	Limit	Over
Hz	dBuV	dB/m	dBuV/m	dBuV/m	dB Detec
000	46.71 -	14.15	32.56	40.00	-7.44 pea
5457	51.42 -	12.30	39.12	46.00	-6.88 pea
3721	47.52	-9.53	37.99	46.00	-8.01 pea
9415	46.16	-7.78	38.38	46.00	-7.62 pea
0407			38.95	46.00	-7.05 pea
1471		-3.60	37.92	46.00	-8.08 pea
	TX B N Only w 60 70 1 Feq. Hz 000 5457 8721 9415	Only worse case is  Reading Ceq. Level  Hz dBuV  000 46.71 -  5457 51.42 -  3721 47.52  9415 46.16	TX B Mode 2412MHz Only worse case is reported  TX B Mode 2412MHz Only worse case is reported  (MHz)  Reading Correct Eq. Level Factor Hz dBuV dB/m 000 46.71 -14.15 5457 51.42 -12.30 6721 47.52 -9.53 67415 46.16 -7.78	TX B Mode 2412MHz  Only worse case is reported  Reading Correct Measure- eq. Level Factor ment  Hz dBuV dB/m dBuV/m  000 46.71 -14.15 32.56  5457 51.42 -12.30 39.12  3721 47.52 -9.53 37.99  9415 46.16 -7.78 38.38	TX B Mode 2412MHz  Only worse case is reported  REPIFCE 15C  (REFIFCE 15C  2 3  2 3  2 3  400 500  Reading Correct Measure- Factor Measure- Hz dBuV dB/m dBuV/m dBuV/m  000 46.71 -14.15 32.56 40.00  5457 51.42 -12.30 39.12 46.00  6721 47.52 -9.53 37.99 46.00  67415 46.16 -7.78 38.38 46.00



Page: 23 of 91

#### **Above 1GHz**

EUT:	WIFI NVR KIT	Model:	JF-IPC-ED2110-IR2-WS
Temperature:	25 ℃	Relative Humidity:	55%
Test Voltage:	AC 120V/60Hz		
Ant. Pol.	Horizontal	WWW.	
Test Mode:	TX B Mode 2412MHz		
Remark:	No report for the emis	ssion which more than '	10 dB below the prescribed

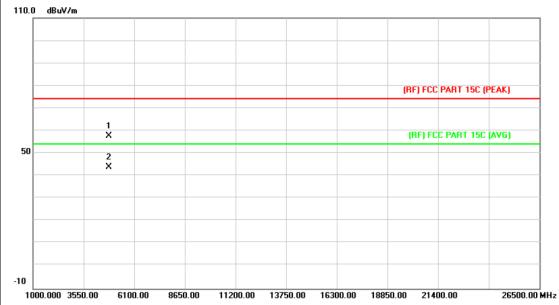


No	o. Mk	Freq.	Reading Level		Measure- ment	Limit	Over	
		MHz	dBu∀	dB/m	dBuV/m	dBuV/m	dB	Detector
1		4823.355	45.21	13.56	58.77	74.00	-15.23	peak
2	*	4824.054	31.32	13.56	44.88	54.00	-9.12	AVG



Page: 24 of 91

EUT:	WIFI NVR KIT	Model:	JF-IPC-ED2110-IR2-WS			
Temperature:	25 ℃	Relative Humidity:	55%			
Test Voltage:	AC 120V/60Hz		WILLIAM STATE			
Ant. Pol.	Vertical					
Test Mode:	TX B Mode 2412MH	z				
Remark:	No report for the emission which more than 10 dB below the prescribed limit.					
	procention innit.					



No.	Mk	Freq.	Reading Level		Measure- ment	Limit	Over	
		MHz	dBu∨	dB/m	dBuV/m	dBuV/m	dB	Detector
1		4823.409	44.08	13.56	57.64	74.00	-16.36	peak
2	*	4824.915	30.31	13.56	43.87	54.00	-10.13	AVG



Page: 25 of 91

EUT:	WIFI NVR KIT	Model: JF-IPC-ED2110-IR2-					
Temperature:	25 ℃	Relative Humidity:	55%				
Test Voltage:	AC 120V/60Hz	AC 120V/60Hz					
Ant. Pol.	Horizontal	Horizontal					
Test Mode:	TX B Mode 2437MH	Iz					
Remark:	No report for the emission which more than 10 dB below the prescribed limit.						
	-						



No	o. Mk	. Freq.	Reading Level		Measure- ment	Limit	Over	
		MHz	dBu∨	dB/m	dBuV/m	dBuV/m	dB	Detector
1		4873.481	44.50	13.86	58.36	74.00	-15.64	peak
2	*	4874.630	30.41	13.86	44.27	54.00	-9.73	AVG



Page: 26 of 91

EUT:	WIFI NVR KIT	Model:	JF-IPC-ED2110-IR2-WS				
Temperature:	25 ℃	Relative Humidity:	55%				
Test Voltage:	AC 120V/60Hz						
Ant. Pol.	Vertical	Vertical					
Test Mode:	TX B Mode 2437MH	lz (M)					
Remark:	No report for the emprescribed limit.	No report for the emission which more than 10 dB below the prescribed limit.					
110.0 JD-3/J-							

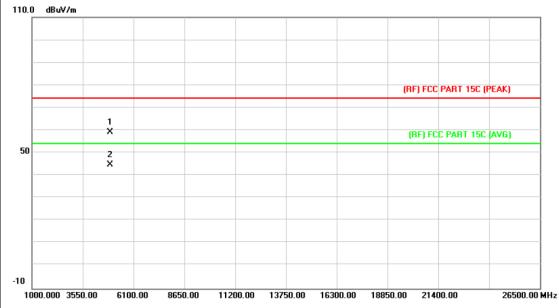


No.	Mk.	Freq.	Reading Level		Measure- ment	Limit	Over	
		MHz	dBu∨	dB/m	dBuV/m	dBuV/m	dB	Detector
1	*	4872.890	30.62	13.85	44.47	54.00	-9.53	AVG
2		4873.601	43.76	13.86	57.62	74.00	-16.38	peak



Page: 27 of 91

EUT:	WIFI NVR KIT	FI NVR KIT <b>Model</b> : JF-IPC-ED2110-IR2					
Temperature:	<b>25</b> ℃	Relative Humidity:	55%				
Test Voltage:	AC 120V/60Hz						
Ant. Pol.	Horizontal	Horizontal					
Test Mode:	TX B Mode 2462MH	łz	THE PARTY OF THE P				
Remark:	No report for the em	No report for the emission which more than 10 dB below the					
	prescribed limit.						
i							



No	. Mk	. Freq.	Reading Level		Measure- ment	Limit	Over	
		MHz	dBu∨	dB/m	dBuV/m	dBuV/m	dB	Detector
1		4924.102	44.98	14.15	59.13	74.00	-14.87	peak
2	*	4925.329	30.64	14.16	44.80	54.00	-9.20	AVG



Page: 28 of 91

EUT:	WIFI NVR KIT	Model:	JF-IPC-ED2110-IR2-WS				
Temperature:	25 ℃	Relative Humidity:	55%				
Test Voltage:	AC 120V/60Hz	AC 120V/60Hz					
Ant. Pol.	Vertical	Vertical					
Test Mode:	TX B Mode 2462MH	lz (M)					
Remark:	No report for the emission which more than 10 dB below the prescribed limit.						



N	o. Mk	. Freq.	Reading Level		Measure- ment	Limit	Over	
		MHz	dBu∀	dB/m	dBuV/m	dBuV/m	dB	Detector
1		4924.075	44.02	14.15	58.17	74.00	-15.83	peak
2	*	4925.014	30.66	14.16	44.82	54.00	-9.18	AVG



Page: 29 of 91

EUT:	WIFI NVR KIT	VR KIT <b>Model:</b> JF-IPC-ED2110-IR2					
Temperature:	<b>25</b> ℃	Relative Humidity:	55%				
Test Voltage:	AC 120V/60Hz						
Ant. Pol.	Horizontal	Horizontal					
Test Mode:	TX G Mode 2412MH	<del>l</del> z					
Remark:	No report for the em	No report for the emission which more than 10 dB below the					
	prescribed limit.						



N	o. MI	c. Freq.	Reading Level		Measure- ment	Limit	Over	
		MHz	dBu∀	dB/m	dBuV/m	dBuV/m	dB	Detector
1	*	4823.976	31.32	13.56	44.88	54.00	-9.12	AVG
2		4824.798	44.51	13.56	58.07	74.00	-15.93	peak



Page: 30 of 91

EUT:	WIFI NVR KIT	Model:	JF-IPC-ED2110-IR2-WS					
Temperature:	25 ℃	Relative Humidity: 55%						
Test Voltage:	AC 120V/60Hz	AC 120V/60Hz						
Ant. Pol.	Vertical	THE PARTY OF THE P						
Test Mode:	TX G Mode 2412MH	Iz						
Remark:	No report for the em prescribed limit.	ission which more thar	10 dB below the					

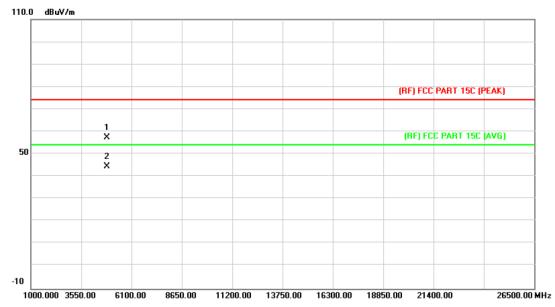


No	. Mk	Freq.	Reading Level		Measure- ment	Limit	Over	
		MHz	dBu∨	dB/m	dBuV/m	dBuV/m	dB	Detector
1		4823.859	44.26	13.56	57.82	74.00	-16.18	peak
2	*	4823.997	31.50	13.56	45.06	54.00	-8.94	AVG



Page: 31 of 91

EUT:	WIFI NVR KIT	Model:	JF-IPC-ED2110-IR2-WS					
Temperature:	25 ℃	Relative Humidity:	55%					
Test Voltage:	AC 120V/60Hz	AC 120V/60Hz						
Ant. Pol.	Horizontal	WWW.						
Test Mode:	TX G Mode 2437MH	lz						
Remark:	No report for the emprescribed limit.	ission which more thar	n 10 dB below the					
	'							



N	lo. Mk	. Freq.	Reading Level		Measure- ment	Limit	Over	
		MHz	dBu∀	dB/m	dBuV/m	dBuV/m	dB	Detector
1		4873.853	43.46	13.86	57.32	74.00	-16.68	peak
2	*	4874.342	30.47	13.86	44.33	54.00	-9.67	AVG



Page: 32 of 91

EUT:	WIFI NVR KIT	Model:	JF-IPC-ED2110-IR2-WS					
Temperature:	25 ℃	Relative Humidity:	55%					
Test Voltage:	AC 120V/60Hz	AC 120V/60Hz						
Ant. Pol.	Vertical	Vertical						
Test Mode:	TX G Mode 2437MH	Iz						
Remark:	No report for the em prescribed limit.	ission which more thar	10 dB below the					

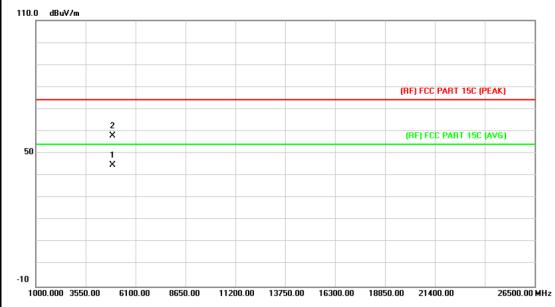


No	р. М	k. Freq.	Reading Level		Measure- ment	Limit	Over	
		MHz	dBu∀	dB/m	dBuV/m	dBuV/m	dB	Detector
1	*	4873.706	30.37	13.86	44.23	54.00	-9.77	AVG
2		4875.473	44.75	13.87	58.62	74.00	-15.38	peak



Page: 33 of 91

EUT:	WIFI NVR KIT	Model: JF-IPC-ED2110-IR2-W					
Temperature:	25 ℃	Relative Humidity:	55%				
Test Voltage:	AC 120V/60Hz	AC 120V/60Hz					
Ant. Pol.	Horizontal	Will be					
Test Mode:	TX G Mode 2462MF	lz					
Remark:	No report for the emission which more than 10 dB below the						
	prescribed limit.						
	No report for the em	TANK TO SERVICE STATE OF THE PERSON OF THE P	n 10 dB below the				



No.	Mk.	Freq.	_	Correct Factor	Measure- ment	Limit	Over	
		MHz	dBu∨	dB/m	dBuV/m	dBuV/m	dB	Detector
1	*	4924.813	30.74	14.15	44.89	54.00	-9.11	AVG
2		4925.227	43.81	14.16	57.97	74.00	-16.03	peak



Page: 34 of 91

EUT:	WIFI NVR KIT	Model:	JF-IPC-ED2110-IR2-WS					
Temperature:	<b>25</b> ℃	Relative Humidity:	55%					
Test Voltage:	AC 120V/60Hz	AC 120V/60Hz						
Ant. Pol.	Vertical	THU THE						
Test Mode:	TX G Mode 2462MF	<del>l</del> z						
Remark:	No report for the em	No report for the emission which more than 10 dB below the						
	prescribed limit.							
a a constant of the constant o								

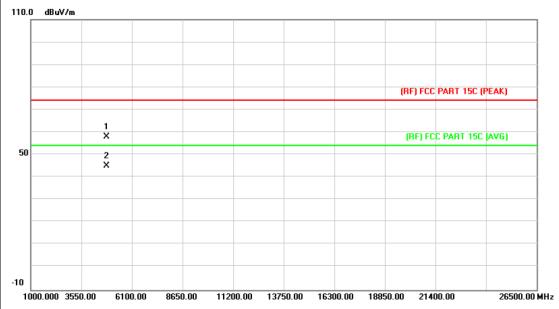


No	. Mk	. Freq.	Reading Level		Measure- ment	Limit	Over	
		MHz	dBu∨	dB/m	dBuV/m	dBuV/m	dB	Detector
1	*	4922.587	30.62	14.14	44.76	54.00	-9.24	AVG
2		4923.868	44.85	14.15	59.00	74.00	-15.00	peak



Page: 35 of 91

EUT:	WIFI NVR KIT	WIFI NVR KIT Model: JF-IPC-ED2110-IR2-				
Temperature:	25 ℃	Relative Humidity:	55%			
Test Voltage:	AC 120V/60Hz					
Ant. Pol.	Horizontal	THU .				
Test Mode:	TX N(HT20) Mode 2	2412MHz				
Remark:	No report for the em	No report for the emission which more than 10 dB below the				
	prescribed limit.					
i						

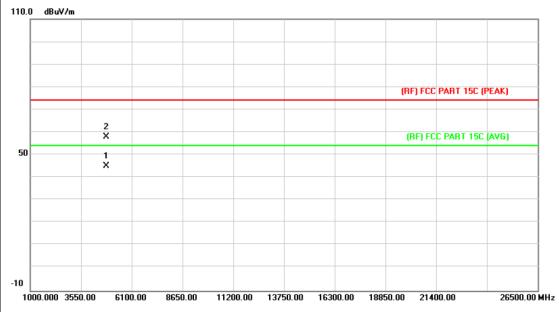


No.	Mk.	Freq.	Reading Level		Measure- ment	Limit	Over	
		MHz	dBu∀	dB/m	dBuV/m	dBuV/m	dB	Detector
1		4823.523	44.49	13.56	58.05	74.00	-15.95	peak
2	*	4823.901	31.36	13.56	44.92	54.00	-9.08	AVG



Page: 36 of 91

EUT:	WIFI NVR KIT	Model:	JF-IPC-ED2110-IR2-WS					
Temperature:	25 ℃	Relative Humidity:	55%					
Test Voltage:	AC 120V/60Hz							
Ant. Pol.	Vertical							
Test Mode:	TX N(HT20) Mode 2412MHz							
Remark:	No report for the emission which more than 10 dB below the prescribed limit.							

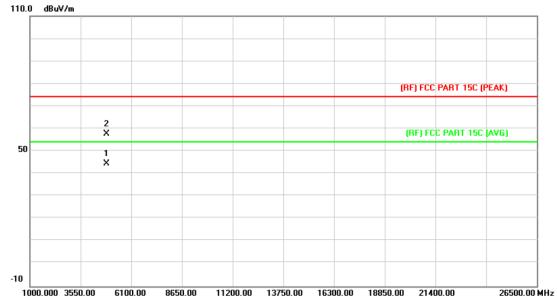


N	o. I	Mk.	Freq.	Reading Level		Measure- ment	Limit	Over	
			MHz	dBu∀	dB/m	dBuV/m	dBuV/m	dB	Detector
1	*	t	4824.075	31.38	13.56	44.94	54.00	-9.06	AVG
2			4824.366	44.37	13.56	57.93	74.00	-16.07	peak



Page: 37 of 91

EUT:	WIFI NVR KIT	Model:	JF-IPC-ED2110-IR2-WS				
Temperature:	25 ℃	Relative Humidity:	55%				
Test Voltage:	AC 120V/60Hz						
Ant. Pol.	Horizontal						
Test Mode:	TX N(HT20) Mode 2	437MHz					
Remark: No report for the emission which more than 10 dB below the prescribed limit.							

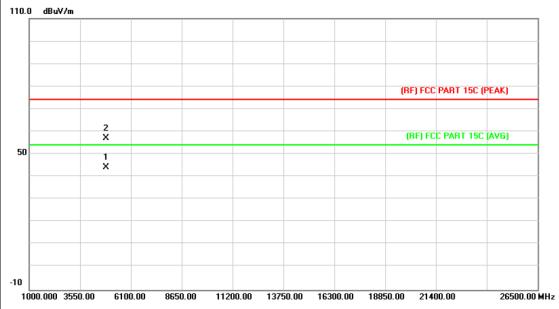


N	0.	Mk.	Freq.	Reading Level		Measure- ment	Limit	Over	
			MHz	dBu∨	dB/m	dBuV/m	dBuV/m	dB	Detector
1		*	4874.534	30.56	13.86	44.42	54.00	-9.58	AVG
2			4875.083	43.86	13.87	57.73	74.00	-16.27	peak



Page: 38 of 91

EUT:	WIFI NVR KIT	Model:	JF-IPC-ED2110-IR2-WS					
Temperature:	25 ℃	Relative Humidity:	55%					
Test Voltage:	AC 120V/60Hz	AC 120V/60Hz						
Ant. Pol.	Vertical	Vertical						
Test Mode:	TX N(HT20) Mode 2	437MHz						
Remark:	No report for the em	No report for the emission which more than 10 dB below the						
	prescribed limit.							
400 000								

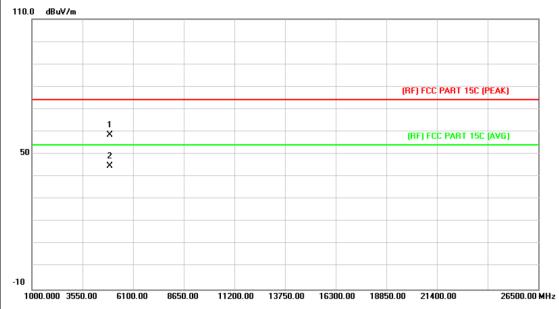


N	lo.	Mk.	Freq.			Measure- ment	Limit	Over	
			MHz	dBu∨	dB/m	dBuV/m	dBuV/m	dB	Detector
1		*	4874.471	30.40	13.86	44.26	54.00	-9.74	AVG
2			4875.008	43.05	13.87	56.92	74.00	-17.08	peak



Page: 39 of 91

EUT:	WIFI NVR KIT	Model:	JF-IPC-ED2110-IR2-WS				
Temperature:	25 ℃	Relative Humidity:	55%				
Test Voltage:	AC 120V/60Hz						
Ant. Pol.	Horizontal	Horizontal					
Test Mode:	TX N(HT20) Mode 2	462MHz					
Remark:	No report for the emission which more than 10 dB below the						
	prescribed limit.						
440. 79.11							

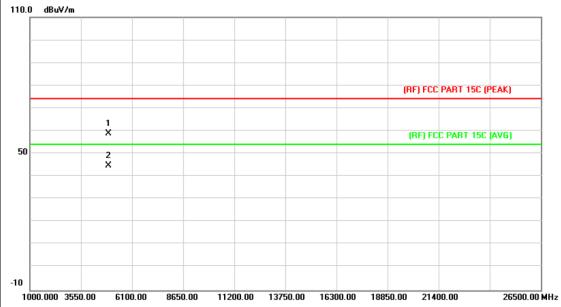


No	. Mk	. Freq.	Reading Level		Measure- ment	Limit	Over	
		MHz	dBu∨	dB/m	dBuV/m	dBuV/m	dB	Detector
1		4922.935	44.30	14.14	58.44	74.00	-15.56	peak
2	*	4924.582	30.60	14.15	44.75	54.00	-9.25	AVG



Page: 40 of 91

EUT:	WIFI NVR KIT Model: JF-IPC-ED2110-IR2-						
Temperature:	25 ℃	25 °C Relative Humidity: 55%					
Test Voltage:	AC 120V/60Hz						
Ant. Pol.	Vertical	Vertical					
Test Mode:	TX N(HT20) Mode 2	462MHz					
Remark:	No report for the emission which more than 10 dB below the prescribed limit.						
4400 ID W							



No.	Mk.	Freq.	Reading Level		Measure- ment	Limit	Over	
		MHz	dBu∀	dB/m	dBuV/m	dBuV/m	dB	Detector
1		4924.327	44.63	14.15	58.78	74.00	-15.22	peak
2	*	4925.005	30.74	14.16	44.90	54.00	-9.10	AVG



Page: 41 of 91

EUT:	WIFI NVR KIT Model: JF-IPC-ED2110-IR2-						
Temperature:	25 ℃	Relative Humidity: 55%					
Test Voltage:	AC 120V/60Hz						
Ant. Pol.	Horizontal	Horizontal					
Test Mode:	TX N(HT40) Mode 2	422MHz					
Remark:	No report for the em	No report for the emission which more than 10 dB below the					
	prescribed limit.						

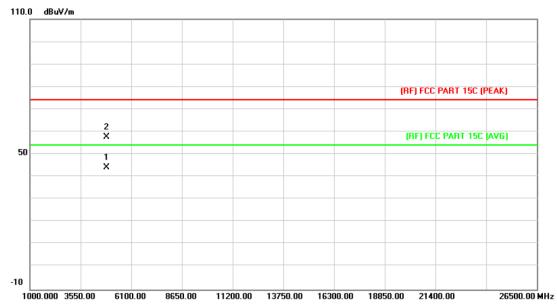


No	o. Mk	. Freq.	Reading Level		Measure- ment	Limit	Over	
		MHz	dBu∀	dB/m	dBuV/m	dBuV/m	dB	Detector
1	*	4844.108	30.34	13.68	44.02	54.00	-9.98	AVG
2		4845.455	43.62	13.69	57.31	74.00	-16.69	peak



Page: 42 of 91

EUT:	WIFI NVR KIT Model: JF-IPC-ED2110-I						
Temperature:	25 ℃	25 °C Relative Humidity: 55%					
Test Voltage:	AC 120V/60Hz						
Ant. Pol.	Vertical						
Test Mode:	TX N(HT40) Mode 2	422MHz					
Remark: No report for the emission which more than 10 dB below the prescribed limit.							

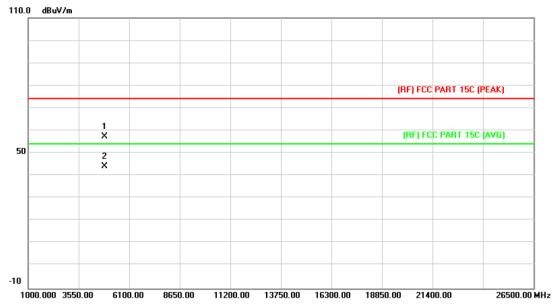


No	. Mk	Freq.	Reading Level		Measure- ment	Limit	Over	
		MHz	dBu∨	dB/m	dBuV/m	dBuV/m	dB	Detector
1	*	4842.563	30.44	13.67	44.11	54.00	-9.89	AVG
2		4844.150	44.03	13.68	57.71	74.00	-16.29	peak



Page: 43 of 91

EUT:	WIFI NVR KIT	Model:	JF-IPC-ED2110-IR2-WS			
Temperature:	25 ℃	Relative Humidity:	55%			
Test Voltage:	AC 120V/60Hz	AC 120V/60Hz				
Ant. Pol.	Horizontal	N. C.				
Test Mode:	TX N(HT40) Mode	2437MHz				
Remark:	No report for the e	No report for the emission which more than 10 dB below the				
	prescribed limit.	prescribed limit.				



No	Mk.	Freq.	Reading Level		Measure- ment	Limit	Over	
		MHz	dBu∨	dB/m	dBuV/m	dBuV/m	dB	Detector
1		4873.631	43.49	13.86	57.35	74.00	-16.65	peak
2	*	4874.558	30.35	13.86	44.21	54.00	-9.79	AVG



Page: 44 of 91

EUT:	WIFI NVR KIT	Model:	JF-IPC-ED2110-IR2-WS			
Temperature:	25 ℃	Relative Humidity:	55%			
Test Voltage:	AC 120V/60Hz	AC 120V/60Hz				
Ant. Pol.	Vertical	THU .				
Test Mode:	TX N(HT40) Mode 2	2437MHz				
Remark:	No report for the em	No report for the emission which more than 10 dB below the				
	prescribed limit.	prescribed limit.				
Í						

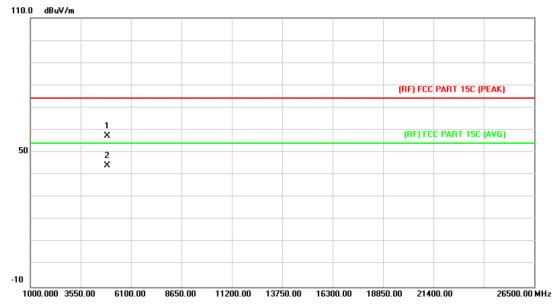


No.	Mk.	Freq.	Reading Level		Measure- ment	Limit	Over	
		MHz	dBu∨	dB/m	dBuV/m	dBuV/m	dB	Detector
1		4874.618	44.32	13.86	58.18	74.00	-15.82	peak
2	*	4875.419	30.39	13.87	44.26	54.00	-9.74	AVG



Page: 45 of 91

EUT:	WIFI NVR KIT	Model:	JF-IPC-ED2110-IR2-WS			
Temperature:	25 ℃	Relative Humidity:	55%			
Test Voltage:	AC 120V/60Hz	AC 120V/60Hz				
Ant. Pol.	Horizontal					
Test Mode:	TX N(HT40) Mode 2	452MHz				
Remark:	No report for the emission which more than 10 dB below the prescribed limit.					

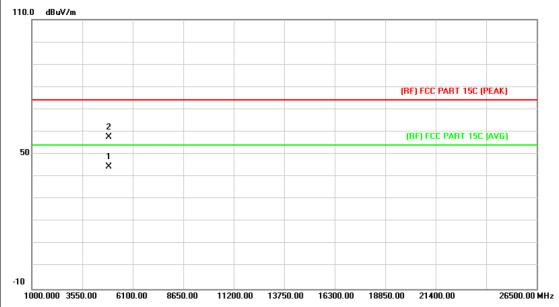


No	o. M	lk. Freq.	_		Measure- ment	Limit	Over	
		MHz	dBu∀	dB/m	dBuV/m	dBuV/m	dB	Detector
1		4903.112	43.45	14.03	57.48	74.00	-16.52	peak
2	*	4903.466	30.27	14.03	44.30	54.00	-9.70	AVG



Page: 46 of 91

EUT:	WIFI NVR KIT	Model:	JF-IPC-ED2110-IR2-WS				
Temperature:	25 ℃	Relative Humidity:	55%				
Test Voltage:	AC 120V/60Hz	AC 120V/60Hz					
Ant. Pol.	Vertical	THU THE					
Test Mode:	TX N(HT40) Mode 2	2452MHz					
Remark:	No report for the em	No report for the emission which more than 10 dB below the					
	prescribed limit.	prescribed limit.					
1							



ı	No.	Mk.	Freq.	Reading Level		Measure- ment	Limit	Over	
			MHz	dBu∀	dB/m	dBuV/m	dBuV/m	dB	Detector
1		*	4902.986	30.35	14.02	44.37	54.00	-9.63	AVG
2			4904.549	43.64	14.03	57.67	74.00	-16.33	peak



Page: 47 of 91

# 6. Restricted Bands Requirement

### 6.1 Test Standard and Limit

6.1.1 Test Standard

FCC Part 15.247(d)

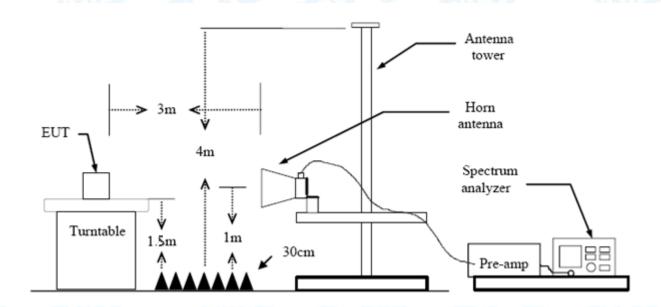
FCC Part 15.209

FCC Part 15.205

6.1.2 Test Limit

Restricted Frequency	Distance Meters (at 3m)				
Band (MHz)	Peak (dBuV/m)	Average (dBuV/m)			
2310 ~2390	74	54			
2483.5 ~2500	74	54			

## 6.2 Test Setup



#### 6.3 Test Procedure

- (1) The measuring distance of 3m shall be used for measurements at frequency up to 1GHz and above 1 GHz. The EUT was placed on a rotating 0.8m high above ground, the table was rotated 360 degrees to determine the position of the highest radiation.
- (2) Measurements at frequency above 1GHz. The EUT was placed on a rotating 1.5m high above the ground. RF absorbers covered the ground plane with a minimum area of 3.0m by 3.0m between the EUT and measurement receiver antenna. The RF absorber shall not exceed 30cm in high above the conducting floor. The table was rotated 360 degrees to



Page: 48 of 91

determine the position of the highest radiation.

- (3) The Test antenna shall vary between 1m and 4m, Both Horizontal and Vertical antenna are set to make measurement.
- (4) The initial step in collecting conducted emission data is a spectrum analyzer peak detector mode pre-scanning the measurement frequency range. Significant peaks are then marked and then Quasi Peak detector mode re-measured.
- (5) If the Peak Mode measured value compliance with and lower than Quasi Peak Mode Limit Bellow 1 GHz, the EUT shall be deemed to meet QP Limits and then no additional QP Mode measurement performed. But the Peak Value and average value both need to comply with applicable limit above 1 GHz.
- (6) Testing frequency range below 1GHz the measuring instrument use VBW=120 kHz with Quasi-peak detection.
- (7) Testing frequency range above 1GHz the measuring instrument use RBW=1 MHz and VBW=3 MHz with Peak Detector for Peak Values, and use RBW=1 MHz and VBW=10 Hz with Peak Detector for Average Values.
- (8) For the actual test configuration, please see the test setup photo.

### 6.4 EUT Operating Condition

The Equipment Under Test was set to Continual Transmitting in maximum power.

### 6.5 Test Data

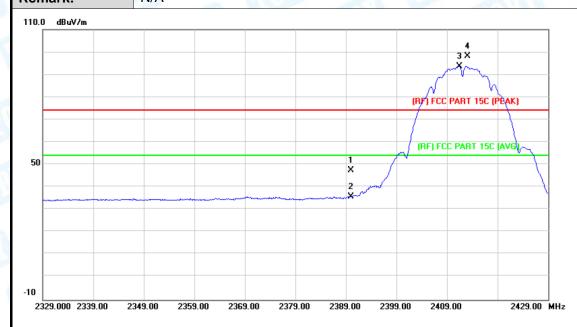
Please see the next page.



Page: 49 of 91

# (1) Radiation Test

EUT:	WIFI NVR KIT	Model:	JF-IPC-ED2110-IR2-WS			
Temperature:	25 ℃	Relative Humidity:	55%			
Test Voltage:	AC 120V/60Hz	AC 120V/60Hz				
Ant. Pol.	Horizontal	will pro-				
Test Mode:	TX B Mode 2412MF	TX B Mode 2412MHz				
Remark:	N/A	N/A				

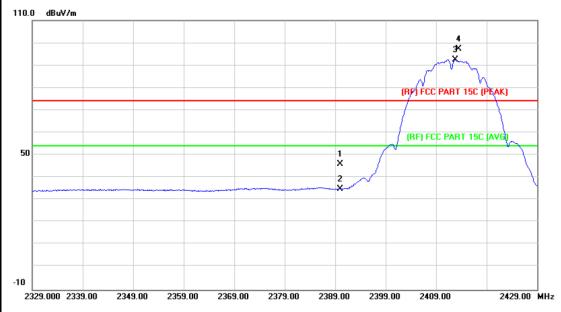


No.	Mk.	. Freq.	Reading Level	Correct Factor	Measure- ment	Limit	Over	
		MHz	dBu∀	dB/m	dBuV/m	dBuV/m	dB	Detector
1		2390.000	46.83	0.77	47.60	74.00	-26.40	peak
2		2390.000	35.02	0.77	35.79	54.00	-18.21	AVG
3	*	2411.400	92.91	0.86	93.77	Fundamental	Frequency	AVG
4	Χ	2413.100	97.33	0.86	98.19	Fundamental	Frequency	peak



Page: 50 of 91

Ş	EUT:	WIFI NVR KIT	Model:	JF-IPC-ED2110-IR2-WS					
Ì	Temperature:	25 ℃	Relative Humidity:	55%					
	Test Voltage:	AC 120V/60Hz	AC 120V/60Hz						
ł	Ant. Pol.	Vertical							
	Test Mode:	TX B Mode 2412MH	z						
	Remark:	N/A	N/A						

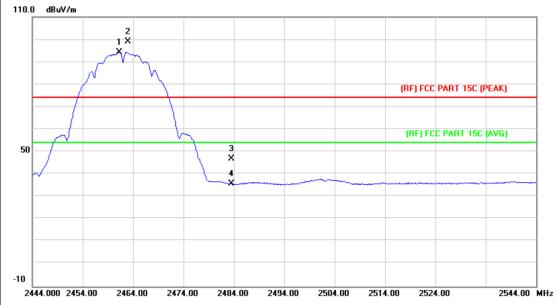


No.	. Mk	. Freq.	Reading Level	Correct Factor	Measure- ment	Limit	Over	
		MHz	dBu∀	dB/m	dBuV/m	dBuV/m	dB	Detector
1		2390.000	45.27	0.77	46.04	74.00	-27.96	peak
2		2390.000	33.94	0.77	34.71	54.00	-19.29	AVG
3	*	2412.800	91.71	0.86	92.57	Fundamental Frequency		AVG
4	X	2413.400	96.31	0.86	97.17	Fundamental F	requency	peak



Page: 51 of 91

EUT:	WIFI NVR KIT	Model:	JF-IPC-ED2110-IR2-WS					
Temperature:	25 ℃ Relative Humidity: 55%							
Test Voltage:	AC 120V/60Hz							
Ant. Pol.	Horizontal	Horizontal						
Test Mode:	TX B Mode 2462MH	TX B Mode 2462MHz						
Remark:	N/A							

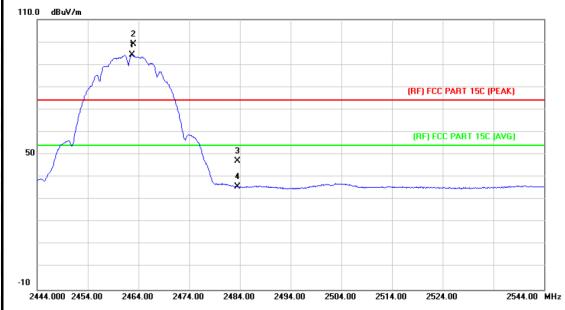


No.	Mk	Freq.	Reading Level	Correct Factor	Measure- ment	Limit	Over	
		MHz	dBu∀	dB/m	dBuV/m	dBuV/m	dB	Detector
1	*	2461.300	93.27	1.07	94.34	Fundamental Frequency		AVG
2	Χ	2463.000	97.87	1.08	98.95	Fundamental	Frequency	peak
3		2483.500	45.65	1.17	46.82	74.00	-27.18	peak
4		2483.500	34.54	1.17	35.71	54.00	-18.29	AVG



Page: 52 of 91

WIFI NVR KIT Model: JF-IPC-ED2110-IR2-WS							
25 ℃ Relative Humidity: 55%							
AC 120V/60Hz							
Vertical							
TX B Mode 2462MHz							
N/A							
	25 °C AC 120V/60Hz Vertical TX B Mode 2462MH	25 °C Relative Humidity:  AC 120V/60Hz  Vertical  TX B Mode 2462MHz					

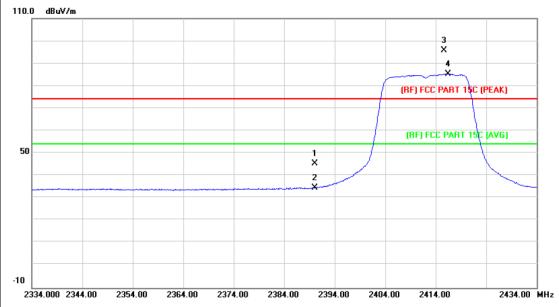


No	. Mk	. Freq.	Reading Level	Correct Factor	Measure- ment	Limit	Over	
		MHz	dBu∀	dB/m	dBuV/m	dBuV/m	dB	Detector
1	*	2462.700	93.15	1.08	94.23	Fundamental Frequency		AVG
2	Χ	2463.000	97.86	1.08	98.94	Fundamental	Frequency	peak
3		2483.500	45.92	1.17	47.09	74.00	-26.91	peak
4		2483.500	34.55	1.17	35.72	54.00	-18.28	AVG



Page: 53 of 91

EUT:	WIFI NVR KIT	Model:	JF-IPC-ED2110-IR2-WS					
Temperature:	25 ℃	Relative Humidity:	55%					
Test Voltage:	AC 120V/60Hz							
Ant. Pol.	Horizontal	Horizontal						
Test Mode:	TX G Mode 2412MHz							
Remark:	N/A							



No.	Mk	. Freq.	Reading Level	Correct Factor	Measure- ment	Limit	Over	
		MHz	dBu∀	dB/m	dBuV/m	dBuV/m	dB	Detector
1		2390.000	44.61	0.77	45.38	74.00	-28.62	peak
2		2390.000	33.71	0.77	34.48	54.00	-19.52	AVG
3	Χ	2415.700	94.86	0.88	95.74	Fundamental Frequency		peak
4	*	2416.400	84.34	0.88	85.22	Fundamental	Frequency	AVG



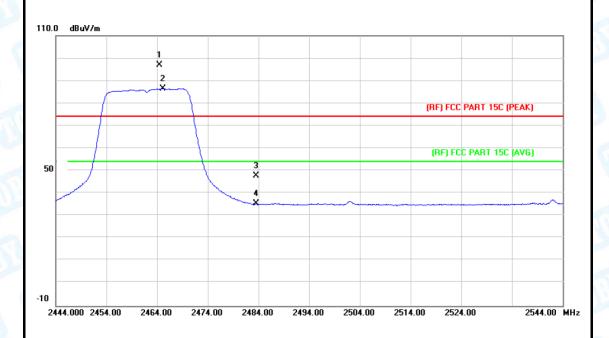
Page: 54 of 91

EUT:			WIFI	NVR KIT	Mode	1:	JF-IPC	-ED2110	0-IR2-WS			
Геm	peratui	re:	25 °C		Relati	ive Humidity:	: 55%					
Test	t Voltag	e:	AC 1	20V/60Hz		80 -	Tim	133				
Ant.	Pol.		Vertic	cal	ASOF		10		M. T.			
Test	t Mode:		TX G	Mode 2412	MHz			J 117	A STATE OF THE PARTY OF THE PAR			
Ren	nark:		N/A	A Britain		1						
110.0	) dBuV/m											
50						1 X 2		ART 15C (PEA)				
-10 23	334.000 234	4.00 2	2354.00	2364.00 2374	4.00 2384.00	) 2394.00 240	04.00 2414.0	10 2	2434.00 MH			
N	lo. Mk.	Fre	eq.	Reading Level	Correct Factor	Measure- ment	Limit	Over				
		MH	Ηz	dBuV	dB/m	dBuV/m	dBuV/m	dB	Detecto			
1		2390.	.000	45.52	0.77	46.29	74.00	-27.71	peak			
2		2390.	.000	34.59	0.77	35.36	54.00	-18.64	AVG			
_	X	2415.	.100	94.43	0.88	95.31	Fundamenta	l Frequency	peak			
3	^								•			



Page: 55 of 91

EUT:	WIFI NVR KIT <b>Model:</b> JF-IPC-ED2110-IR2-WS						
Temperature:	25 °C Relative Humidity: 55%						
Test Voltage:	AC 120V/60Hz						
Ant. Pol.	Horizontal	Horizontal					
Test Mode:	TX G Mode 2462MHz						
Remark:	N/A						

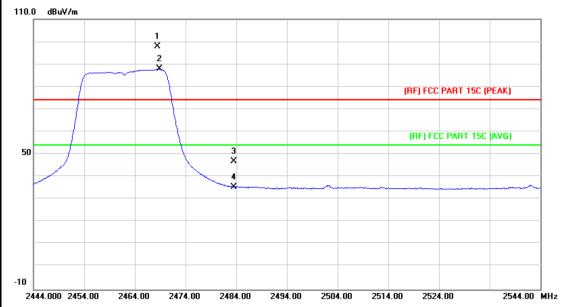


N	lo. M	k. Freq.	Reading Level	Correct Factor	Measure- ment	Limit	Over	
		MHz	dBu∨	dB/m	dBuV/m	dBuV/m	dB	Detector
1	X	2464.400	95.77	1.08	96.85	Fundamental Frequency		peak
2	*	2465.200	85.43	1.09	86.52	Fundamental F	requency !	AVG
3		2483.500	46.68	1.17	47.85	74.00	-26.15	peak
4		2483.500	34.18	1.17	35.35	54.00	-18.65	AVG



Page: 56 of 91

EUT:	WIFI NVR KIT	Model:	JF-IPC-ED2110-IR2-WS					
Temperature:	25 °C Relative Humidity: 55%							
Test Voltage:	AC 120V/60Hz							
Ant. Pol.	Vertical	Vertical						
Test Mode:	TX G Mode 2462M	TX G Mode 2462MHz						
Remark:	N/A							

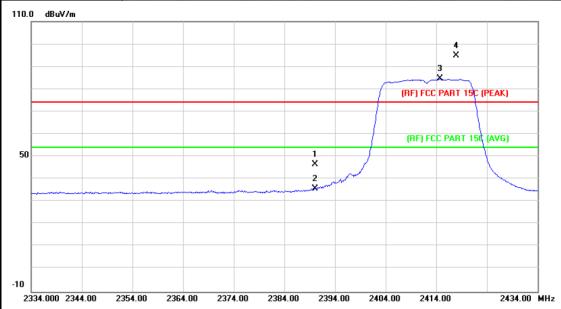


No	. Mk	. Freq.	Reading Level	Correct Factor	Measure- ment	Limit	Over	
		MHz	dBu∀	dB/m	dBuV/m	dBuV/m	dB	Detector
1	Χ	2468.500	96.83	1.11	97.94	Fundamental Frequency		peak
2	*	2468.900	86.71	1.11	87.82	Fundamental	Frequency	AVG
3		2483.500	45.73	1.17	46.90	74.00	-27.10	peak
4		2483.500	34.40	1.17	35.57	54.00	-18.43	AVG



Page: 57 of 91

EUT:	WIFI NVR KIT	Model:	JF-IPC-ED2110-IR2-WS
Temperature:	25 ℃	Relative Humidity:	55%
Test Voltage:	AC 120V/60Hz		
Ant. Pol.	Horizontal		
Test Mode:	TX N(HT20) Mode 2	412MHz	
Remark:	N/A		



No	. Mk	. Freq.	Reading Level	Correct Factor	Measure- ment	Limit	Over	
		MHz	dBu∨	dB/m	dBuV/m	dBuV/m	dB	Detector
1		2390.000	45.80	0.77	46.57	74.00	-27.43	peak
2		2390.000	34.97	0.77	35.74	54.00	-18.26	AVG
3	*	2414.700	83.64	0.88	84.52	Fundamental	Frequency	AVG
4	X	2417.900	94.10	0.89	94.99	Fundamental	Frequency	peak



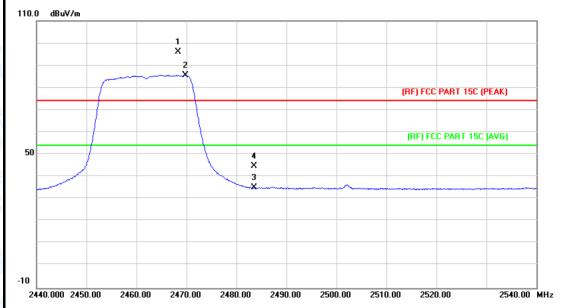
Page: 58 of 91

UT:			WIFI	NVR KIT	Мо	del:		JF-IPC-ED2110-IR2-W		
em	peratui	e:	25 ℃		Rel	ative Hu	umidity:	55%		
est	Voltag	e:	AC 12	20V/60Hz		12.0	100	(m)	133	
nt.	Pol.		Vertic	al	1 11	No.	1	10		
est	Mode:		TX N	(HT20) Mo	ode 2412	ИНz	W	3	2 11	
lem	ark:		N/A	Barre	-	1 12			13	_ (
110.0	dBuV/m									
									4	
								3	×	
								X	PART 15C (PEAK	
-								(,		
-								(RF) FCC	PART 15¢ (AVG	)
50						1 X				
-						2				
ŀ			·							
-										
-										
-10   233	34.000 234	4.00 2	2354.00	2364.00 2	374.00 238	4.00 239	4.00 240	4.00 2414.	00 2	434.00 MH
				Reading	Corre	ct Me	asure-			
N	o. Mk.	Fr	eq.	Level	Fact	or m	nent	Limit	Over	
		MI	Hz	dBu∨	dB/m	dE	BuV/m	dBuV/m	dB	Detecto
1		2390	.000	45.99	0.77	4	6.76	74.00	-27.24	peak
2		2390	.000	33.69	0.77	3	4.46	54.00	-19.54	AVG
3	*	2414	.700	83.20	0.88	8	4.08	Fundamenta	I Frequency	AVG
4	X	2415	.700	93.67	0.88	9	4.55	Fundamenta	I Frequency	peak



Page: 59 of 91

EUT:	WIFI NVR KIT	Model:	JF-IPC-ED2110-IR2-WS
Temperature:	25 ℃	Relative Humidity:	55%
Test Voltage:	AC 120V/60Hz		
Ant. Pol.	Horizontal		
Test Mode:	TX N(HT20) Mode 2	462MHz	
Remark:	N/A		10:10 L

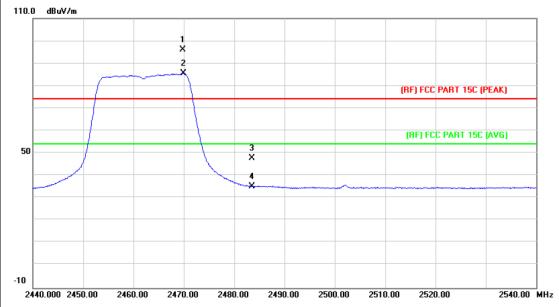


No.	Mk	. Freq.	Reading Level	Correct Factor	Measure- ment	Limit	Over	
		MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	Detector
1	*	2468.300	95.09	1.11	96.20	Fundamental F	requency )	peak
2	Χ	2469.800	84.54	1.11	85.65	Fundamental F	requency	peak
3		2483.500	33.91	1.17	35.08	74.00	-38.92	peak
4		2483.500	43.71	1.17	44.88	74.00	-29.12	peak



Page: 60 of 91

EUT:	WIFI NVR KIT	Model:	JF-IPC-ED2110-IR2-WS
Temperature:	25 ℃	Relative Humidity:	55%
Test Voltage:	AC 120V/60Hz		and the same
Ant. Pol.	Vertical	HILL STORY	
Test Mode:	TX N(HT20) Mode 2	462MHz	
Remark:	N/A		



No	. Mk	c. Freq.	Reading Level	Correct Factor	Measure- ment	Limit	Over	
		MHz	dBu∀	dB/m	dBuV/m	dBuV/m	dB	Detector
1	X	2469.800	94.83	1.11	95.94	Fundamental	Frequency	peak
2	*	2469.900	84.44	1.11	85.55	Fundamental	Frequency	AVG
3		2483.500	46.67	1.17	47.84	74.00	-26.16	peak
4		2483.500	34.11	1.17	35.28	54.00	-18.72	AVG



Page: 61 of 91

EUT			WIFI	NVR KIT	Mode	Model:			C-ED2110-	IR2-WS
Гет	peratu	e:	25 °C		Relat	ive Humidi	ty:	55%		
<b>Test</b>	Voltag	e:	AC 1	20V/60Hz		29 6		(m)	135	
۹nt.	Pol.		Horiz	ontal	UKO		1	10		
Test	Mode:		TX N	(HT40) Mod	e 2422MH	lz	13.0		3 11	Line .
Rem	nark:		N/A	A STATE OF THE PARTY OF THE PAR	- Cini	1 6	e	TIPS	13	_ {
110.0	) dBuV/m									
						3 X		•	4 *	
					$\overline{}$		V	(RF) FCC P	PART 15C (PEAK	)
								(RF) FCC	PART 15C (AVG	1
50				X 2	$\sqrt{}$				\rangle \rangle	4
				<del>-</del>						
-10										
23	354.000 236	4.00 2	374.00	2384.00 239	4.00 2404.0	0 2414.00	2424.00	2434.0	00 2	454.00 MH
N	lo. Mk	Fre	-u	Reading Level	Correct			imit	Over	
11			٠٩٠	Level	i actor	ment				
		MH		dBu∀	dB/m	dBuV/m	d	BuV/m	dB	Detecto
1		MH 2390.	łz					BuV/m 74.00	dB -25.62	
			dz 000	dBu∨	dB/m	dBuV/m	7			peak
1	X	2390.	000 000	dBu∨ 47.61	dB/m 0.77	dBu√/m 48.38	Ţ	74.00 54.00	-25.62	peak AVG peak



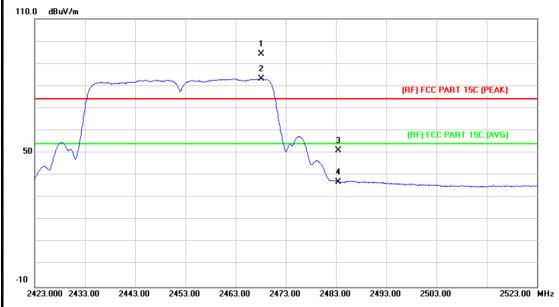
Page: 62 of 91

UT			WIFI	NVR KIT	Mod	del:		JF-IP(	C-ED2110-	IR2-W
em	peratu	re:	25 ℃		Rel	ative Hu	umidity	: 55%		
est	Voltag	e:	AC 12	20V/60Hz		118		Call	133	
۱nt.	Pol.		Vertic	al	JAN 1			1 6		LITT.
est	Mode:		TX N	(HT40) Mod	de 2422N	ИHz			a W	
Rem	ark:		N/A	A STATE OF	1				13	
110.0	dBuV/m						,			
								3 X	4 X PART 15C (PEAK	3
								(RF) FCC	PART 15C (AVE	i)
50				× 2 ×					V	5
-10 23	54.000 236	64.00 2	2374.00	2384.00 239	4.00 240	1.00 241	4.00 242	24.00 2434.	00 2	454.00 MF
N	lo. Mk	. Fr	eq.	Reading Level	Corre Facto		asure- nent	Limit	Over	
		M	Hz	dBu∀	dB/m	dE	BuV/m	dBuV/m	dB	Detecto
1		2390	.000	47.64	0.77	4	8.41	74.00	-25.59	peal
_		2390	.000	35.71	0.77	3	6.48	54.00	-17.52	AVG
2	Х	2425	.600	92.10	0.93	9	3.03	Fundamenta	al Frequency	peal
3	/				0.00		2 22			A)/C
	*	2437	.700	81.35	0.98	ŏ	2.33	Fundamenta	al Frequency	AVC



Page: 63 of 91

EUT:	WIFI NVR KIT	Model:	JF-IPC-ED2110-IR2-WS					
Temperature:	25 ℃	Relative Humidity:	55%					
Test Voltage:	AC 120V/60Hz							
Ant. Pol.	Horizontal	Horizontal						
Test Mode:	TX N(HT40) Mode 2	452MHz						
Remark:	N/A							



No	. Mk	. Freq.	Reading Level	Correct Factor	Measure- ment	Limit	Over	
		MHz	dBu∀	dB/m	dBuV/m	dBuV/m	dB	Detector
1	X	2468.100	93.05	1.11	94.16	Fundamenta	I Frequency	peak
2	*	2468.200	82.15	1.11	83.26	Fundamenta	I Frequency	AVG
3		2483.500	49.94	1.17	51.11	74.00	-22.89	peak
4		2483.500	35.93	1.17	37.10	54.00	-16.90	AVG



Page: 64 of 91

EUT:			WIFI	NVR KIT	Мо	del:	JF-IPC	C-ED2110-	IR2-WS
Temp	eratu	re:	25 °C		Rel	ative Humidity	<b>7:</b> 55%		
Test V	/oltag	e:	AC 1	20V/60Hz		(1) V	Tim	1323	
Ant. F	ol.		Vertic	cal	N. A. A.		J. C		
Test N	/lode:		TX N	(HT40) Mod	de 2452	ИНz			A STATE OF THE PARTY OF THE PAR
Rema	rk:		N/A	Bir	100	11		13	_ (
110.0	dBuV/m								
					1				
					×				
					×		(DE) ECC D	ART 15C (PEAK	
				,	1		(III ) T CC T	ATT 130 (I LAK	,
					<del>                                     </del>		(BF) FCC	PART 15C (AVG	1
50	77					√ 3 ×	(11)		
	J					1			
-10 <u>2423</u> .	.000 243	3.00 2	2443.00	2453.00 246	3.00 247	3.00 2483.00 24	93.00 2503.0	00 2	523.00 MHz
				Reading	Corre	ct Measure-			
No	. Mk	Fr	eq.	Level	Fact		Limit	Over	
		MI	Hz	dBu∀	dB/m	dBuV/m	dBuV/m	dB	Detecto
1	Χ	2468	.100	92.70	1.11	93.81	Fundamental	Frequency	peak
2	*	2468	.200	81.77	1.11	82.88	Fundamental	Frequency	AVG
3		2483	.500	48.29	1.17	49.46	74.00	-24.54	peak

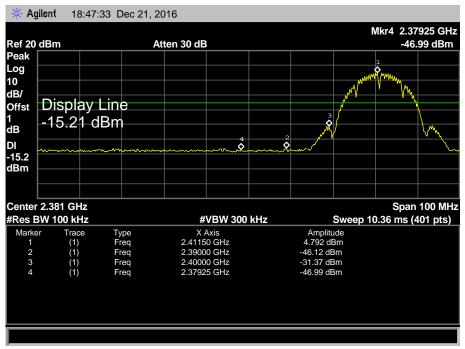


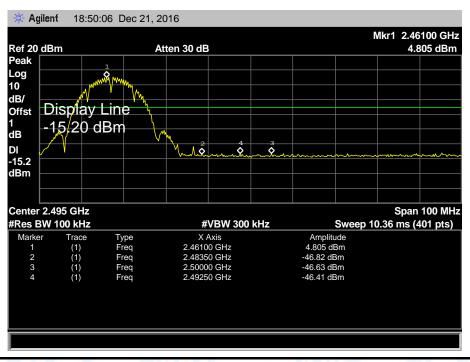


Page: 65 of 91

### (2) Conducted Test

EUT:	WIFI NVR KIT	Model:	JF-IPC-ED2110-IR2-WS
Temperature:	<b>25</b> ℃	Relative Humidity:	55%
Test Voltage:	AC 120V/60Hz	THURSDAY	
Test Mode:	TX B Mode 2412MHz / TX B Mode 2462MHz		
Remark:	The EUT is programed in continuously transmitting mode		



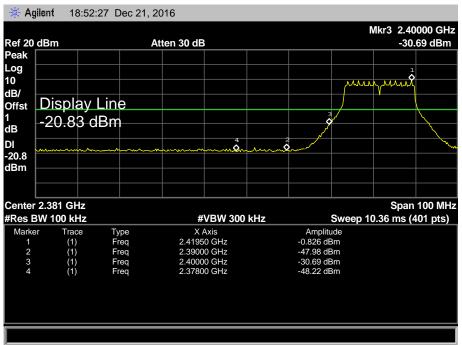


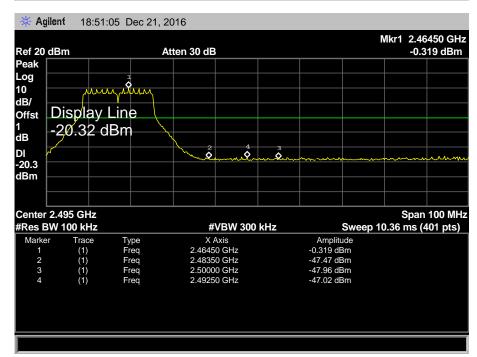


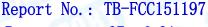


Page: 66 of 91

EUT:	WIFI NVR KIT	Model:	JF-IPC-ED2110-IR2-WS
Temperature:	<b>25</b> ℃	Relative Humidity:	55%
Test Voltage:	AC 120V/60Hz		
Test Mode:	TX G Mode 2412MHz / TX G Mode 2462MHz		
Remark:	The EUT is programed in continuously transmitting mode		



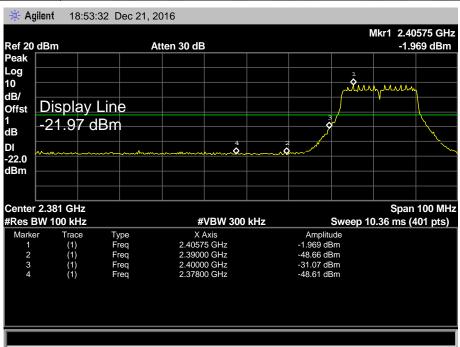


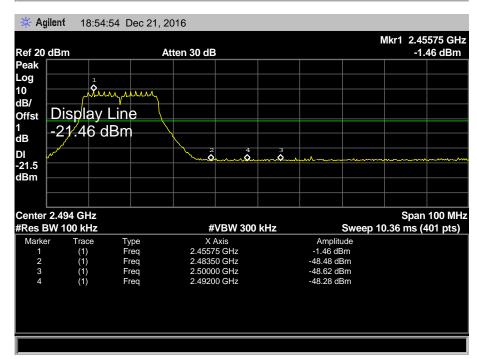


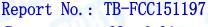


Page: 67 of 91

EUT:	WIFI NVR KIT	Model:	JF-IPC-ED2110-IR2-WS
Temperature:	25 ℃	Relative Humidity:	55%
Test Voltage:	AC 120V/60Hz		
Test Mode:	TX N(HT20) Mode 2412MHz / TX N(HT20) Mode 2462MHz		
Remark:	The EUT is programed in continuously transmitting mode		



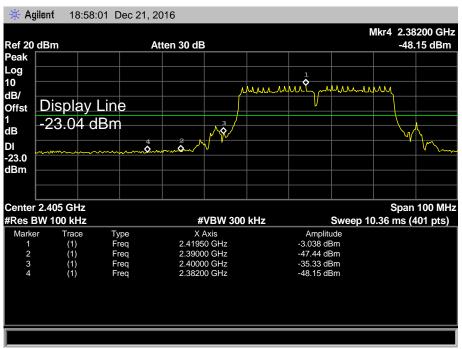


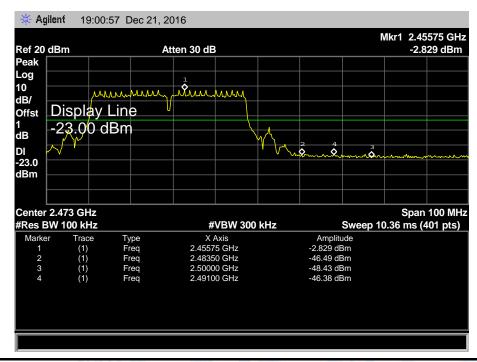




Page: 68 of 91

EUT:	WIFI NVR KIT	Model:	JF-IPC-ED2110-IR2-WS
Temperature:	25 ℃	Relative Humidity:	55%
Test Voltage:	AC 120V/60Hz		
Test Mode:	TX N(HT40) Mode 2422MHz / TX N(HT40) Mode 2452MHz		
Remark:	The EUT is programed in continuously transmitting mode		







Page: 69 of 91

# 7. Bandwidth Test

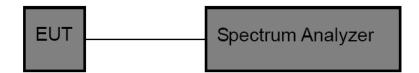
### 7.1 Test Standard and Limit

7.1.1 Test Standard FCC Part 15.247 (a)(2)

7.1.2 Test Limit

FCC Part 15 Subpart C(15.247)/RSS-210			
Test Item	Limit	Frequency Range(MHz)	
Bandwidth	>=500 KHz (6dB bandwidth)	2400~2483.5	

## 7.2 Test Setup



### 7.3 Test Procedure

- (1) The EUT was directly connected to the spectrum analyzer and antenna output port as show in the block diagram above.
- (2) The bandwidth is measured at an amplitude level reduced 6dB from the reference level. The reference level is the level of the highest amplitude signal observed from the transmitter at the fundamental frequency. Once the reference level is established, the equipment is conditioned with typical modulating signal to produce the worst –case (i.e the widest) bandwidth.
- (3)Measure the channel separation the spectrum analyzer was set to Resolution Bandwidth:100 kHz, and Video Bandwidth:300 kHz, Detector: Peak, Sweep Time set auto.

# 7.4 EUT Operating Condition

The EUT was set to continuously transmitting in each mode and low, Digital photo framesdle and high channel for the test.



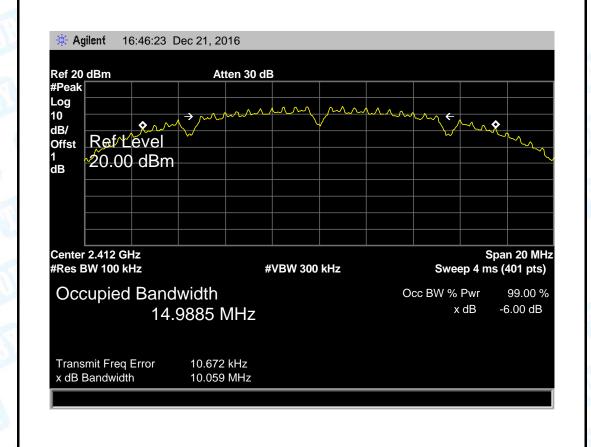
Page: 70 of 91

## 7.5 Test Data

EUT:	WIFI NVR KIT	Model:	JF-IPC-ED2110-IR2- WS
Temperature:	25 ℃	Relative Humidity:	55%
Test Voltage:	AC 120V/60Hz		
Test Mode:	TX 802.11B Mode		
Channel frequence	cy 6dB Bandwidth	99% Bandwidth	Limit
(MHz)	(MHz)	(MHz)	(MHz)
2412	10.059	14.9885	
2437	10.067	14.9828	>=0.5
2462	9.622	14.9642	
902 44D Mode			

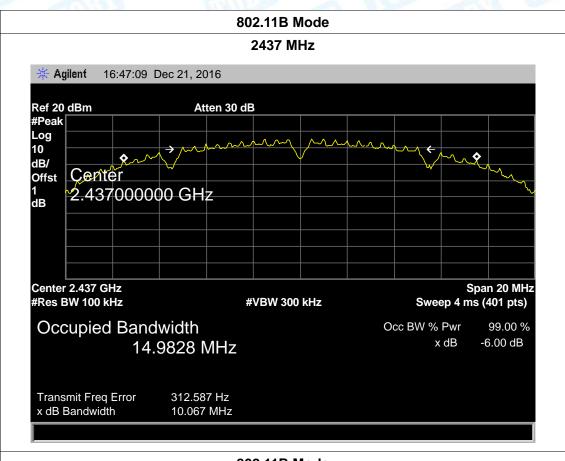
#### 802.11B Mode

#### 2412 MHz



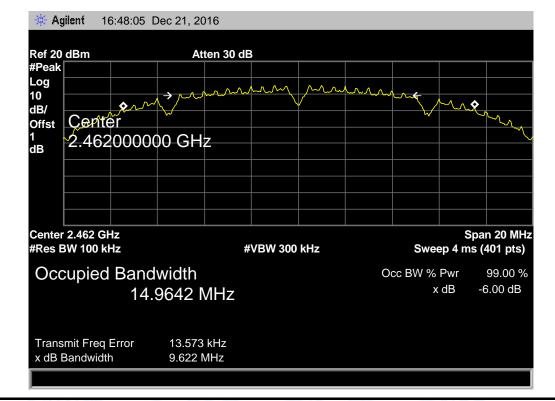


Page: 71 of 91



### 802.11B Mode

#### 2462 MHz

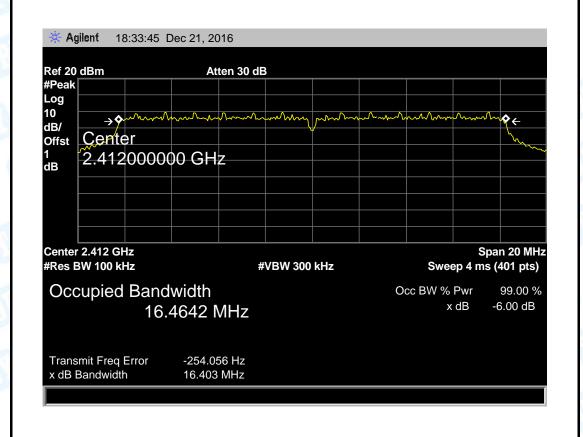




Page: 72 of 91

EUT:	WIFI NVR KIT	Model:	JF-IPC-ED2110-IR2-
	VVII I I I V I C I C I I		WS
Temperature:	25 ℃	Relative Humidity:	55%
Test Voltage:	AC 120V/60Hz		
Test Mode:	TX 802.11G Mode		
Channel frequence	cy 6dB Bandwidth	99% Bandwidth	Limit
(MHz)	(MHz)	(MHz)	(MHz)
2412	16.403	16.4642	
2437	16.437	16.5179	>=0.5
2462	16.396	16.5227	
802.11G Mode			

#### 2412 MHz

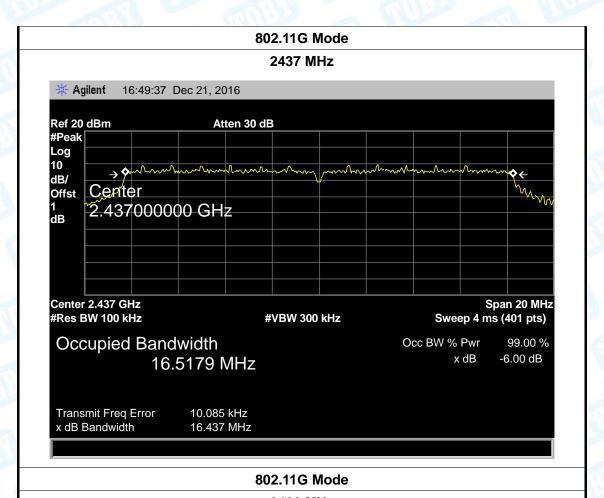




x dB Bandwidth

Report No.: TB-FCC151197

Page: 73 of 91



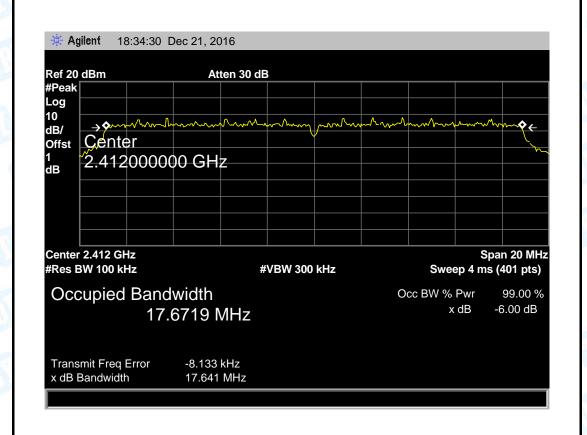
#### 2462 MHz \* Agilent 16:48:50 Dec 21, 2016 Ref 20 dBm Atten 30 dB #Peak Log 10 dB/ Center Offst 1 dB 2.462000000 GHz Center 2.462 GHz Span 20 MHz #Res BW 100 kHz **#VBW 300 kHz** Sweep 4 ms (401 pts) Occupied Bandwidth Occ BW % Pwr 99.00 % -6.00 dB x dB 16.5227 MHz Transmit Freq Error -10.810 kHz

16.396 MHz



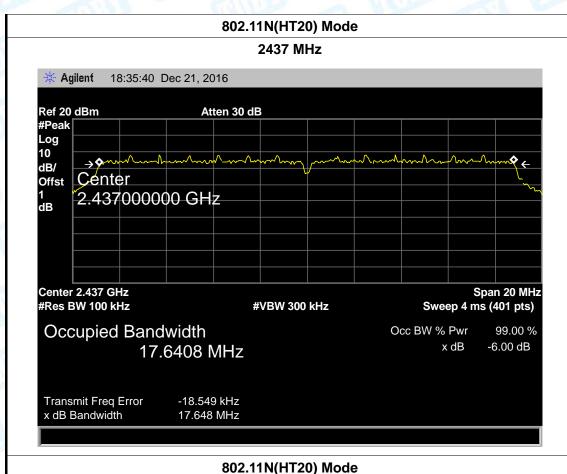
74 of 91 Page:

EUT:	WIFI NVR KIT	Model:	JF-IPC-ED2110-IR2-	
L01.	VVII I I I V I X I X I I	Woder.	WS	
Temperature:	25 ℃	Relative Humidity:	55%	
Test Voltage:	AC 120V/60Hz			
Test Mode:	Test Mode: TX 802.11N(HT20) Mode			
Channel frequency 6dB Bandwid		99% Bandwidth	Limit	
(MHz)	(MHz)	(MHz)	(MHz)	
2412	17.641	17.6719		
2437	17.648	17.6408	>=0.5	
2462	17.642	17.6285		
802.11N(HT20) Mode				





Page: 75 of 91



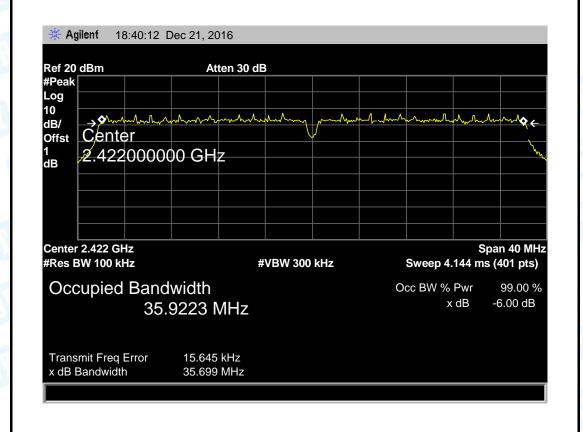
#### 2462 MHz \* Agilent 18:36:27 Dec 21, 2016 Ref 20 dBm Atten 30 dB #Peak Log 10 dB/ Center Offst 1 dB 2.462000000 GHz Center 2.462 GHz Span 20 MHz #Res BW 100 kHz **#VBW 300 kHz** Sweep 4 ms (401 pts) Occupied Bandwidth Occ BW % Pwr 99.00 % -6.00 dB x dB 17.6285 MHz Transmit Freq Error -16.086 kHz x dB Bandwidth 17.642 MHz



Page: 76 of 91

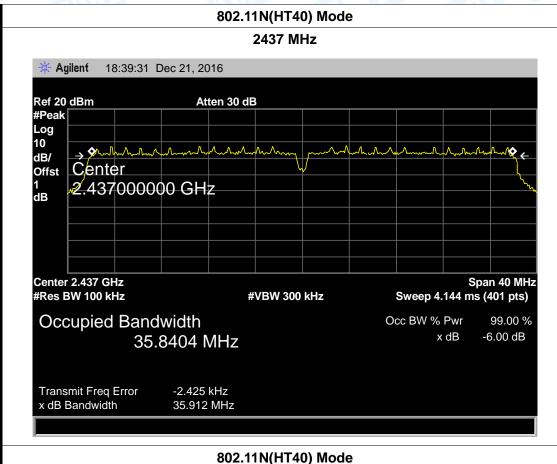
EUT:	WIFI NVR KIT	Model:	JF-IPC-ED2110-IR2-	
			WS	
Temperature:	25 ℃	Relative Humidity:	55%	
Test Voltage:	AC 120V/60Hz			
Test Mode:	Test Mode: TX 802.11N(HT40) Mode			
Channel frequence	cy 6dB Bandwidth	99% Bandwidth	Limit	
(MHz)	(MHz)	(MHz)	(MHz)	
2422	35.699	35.9223		
2437	35.912	35.8404	>=0.5	
2452	36.067	35.8951		
802.11N(HT40) Mode				

#### 702.1111(111 <del>1</del>0) 1





Page: 77 of 91



### 2452 MHz \* Agilent 18:38:10 Dec 21, 2016 Ref 20 dBm Atten 30 dB #Peak Log 10 A.M.M.M. dB/ Offst 1 dB Center 2.452 GHz Span 40 MHz #Res BW 100 kHz Sweep 4.144 ms (401 pts) **#VBW 300 kHz** Occupied Bandwidth Occ BW % Pwr 99.00 % -6.00 dB x dB 35.8951 MHz Transmit Freq Error 5.097 kHz x dB Bandwidth 36.067 MHz



Page: 78 of 91

# 8. Peak Output Power Test

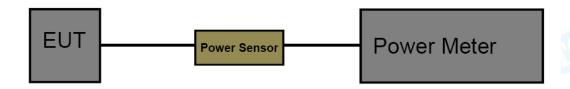
### 8.1 Test Standard and Limit

8.1.1 Test Standard FCC Part 15.247 (b)

8.1.2 Test Limit

FCC Part 15 Subpart C(15.247)/RSS-210			
Test Item Limit Frequency Range(MHz)			
Peak Output Power	1 Watt or 30 dBm	2400~2483.5	

## 8.2 Test Setup



### 8.3 Test Procedure

The measurement is according to section 9.1.2 of KDB 558074 D01 DTS Meas Guidance v03r05.

The EUT was connected to RF power meter via a broadband power sensor as show the block above. The power sensor video bandwidth is greater than or equal to the DTS bandwidth of the equipment.

## 8.4 EUT Operating Condition

The EUT was set to continuously transmitting in the max power during the test.



Page: 79 of 91

# 8.5 Test Data

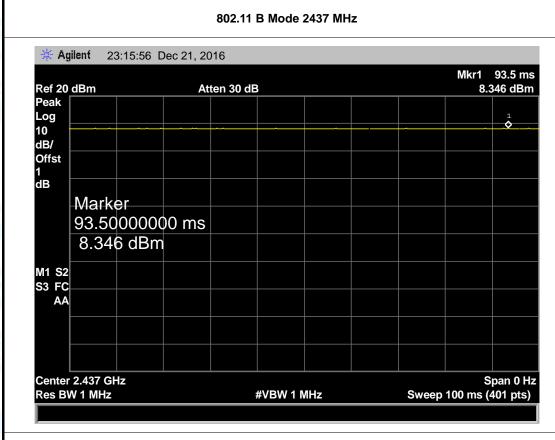
EUT:	WIFI NVR KIT	Model:	JF-IPC-ED2110-IR2-WS
Temperature:	<b>25</b> ℃	Relative Humidity:	55%
Test Voltage:	AC 120V/60Hz	The same of the sa	anis .
Mode	Channel frequency	Test Result	Limit (dBm)
	(MHz)	(dBm)	
	2412	18.44	
802.11b	2437	18.77	
	2462	18.40	
	2412	16.07	30
802.11g	2437	16.55	
	2462	16.94	
000 44 =	2412	15.06	30
802.11n (HT20)	2437	15.43	
(11120)	2462	15.16	
000 44	2422	14.78	
802.11n (⊔T40)	2437	15.08	
(HT40)	2452	14.53	
	Res	sult: PASS	

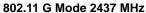
	Duty Cy	cle
Mode	Channel frequency (MHz)	Test Result
	2412	
802.11b	2437	
	2462	
	2412	
802.11g	2437	
	2462	. 000/
000 44	2412	>98%
802.11n (HT20)	2437	
(П120)	2462	
000 44	2422	
802.11n (HT40)	2437	
(П140)	2452	
Please see belov	w plots	

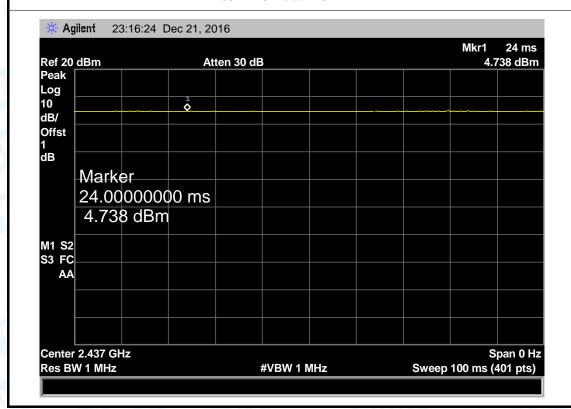


Page: 80 of 91





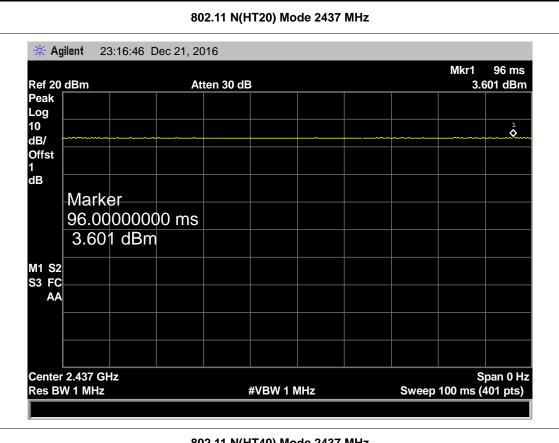


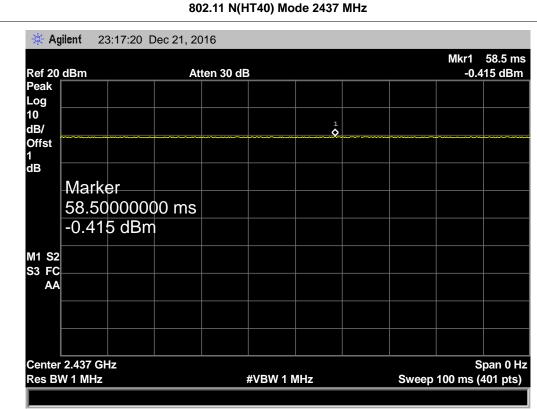




Page: 81 of 91









Page: 82 of 91

# 9. Power Spectral Density Test

### 9.1 Test Standard and Limit

9.1.1 Test Standard FCC Part 15.247 (e)

9.1.2 Test Limit

FCC Part 15 Subpart C(15.247)				
Test Item Limit Frequency Range(MHz)				
Power Spectral Density 8dBm(in any 3 kHz) 2400~2483.5				

### 9.2 Test Setup



### 9.3 Test Procedure

The EUT was directly connected to the Spectrum Analyzer and antenna output port as show in the block diagram above. The measurement according to section 10.2 of KDB 558074 D01 DTS Meas Guidance v03r05.

- (1) The EUT was directly connected to the spectrum analyzer and antenna output port as show in the block diagram above.
- (2) Set analyser center frequency to DTS channel center frequency.
- (3) Set the span to 1.5 times the DTS bandwidth.
- (4) Set the RBW to: 3 kHz(5) Set the VBW to: 10 kHz
- (6) Detector: peak
- (7) Sweep time: auto
- (8) Allow trace to fully stabilize. Then use the peak marker function to determine the maximum amplitude level.

## 9.4 EUT Operating Condition

The EUT was set to continuously transmitting in each mode and low, Digital photo framesdle and high channel for the test.

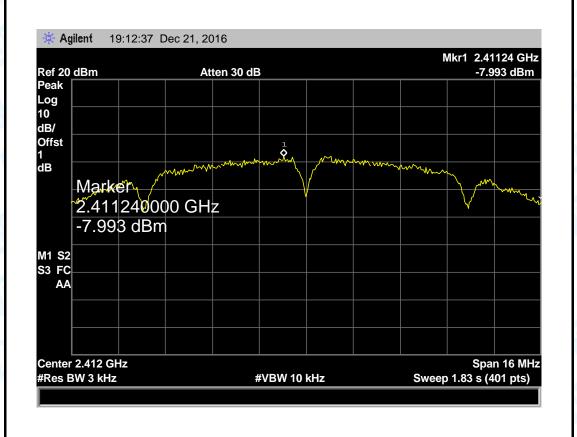


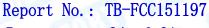
Page: 83 of 91

### 9.5 Test Data

EUT:	WIFI NVR KIT		Model:	JF-IPC-ED2110-IR2-WS
Temperature:	25 ℃	6	Relative Humidity:	55%
Test Voltage:	AC 120V/60Hz			
Test Mode:	TX 802.1	TX 802.11B Mode		
Channel Frequency Po		wer Density	Limit	
(MHz)		(3	kHz/dBm)	(dBm)
2412			-7.993	
2437		-6.538	8	
2462			-8.161	
		904	2 11 R Modo	

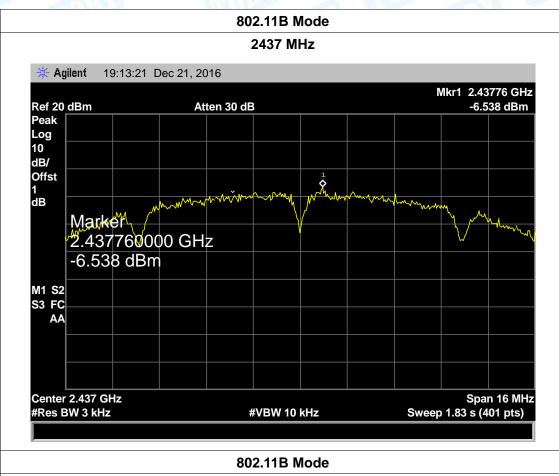
### 802.11B Mode







Page: 84 of 91





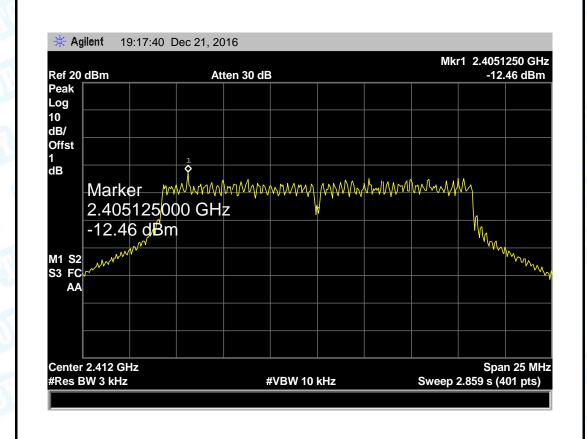


Page: 85 of 91

ķ	EUT:	WIFI NVR KIT	Model:	JF-IPC-ED2110-IR2-WS
	Temperature:	<b>25</b> ℃	Temperature:	25 ℃
	Test Voltage:	AC 120V/60Hz	133	
	Test Mode:	TX 802.11G Mode		

Channel Frequency	Power Density	Limit
(MHz)	(3 kHz/dBm)	(dBm)
2412	-12.46	
2437	-14.36	8
2462	-14.90	

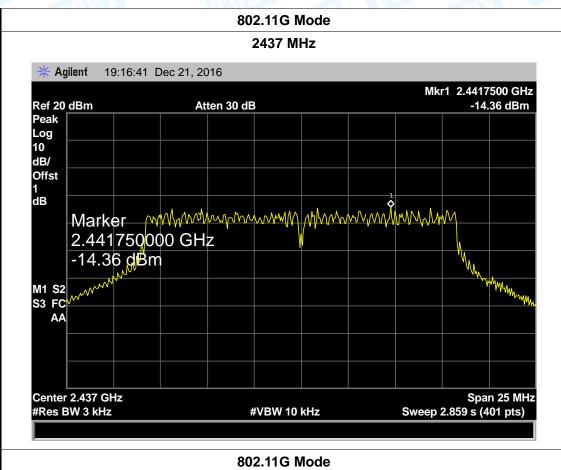
### 802.11G Mode







Page: 86 of 91

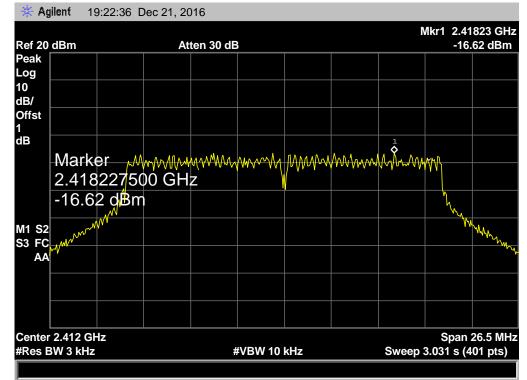


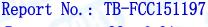
2462 MHz \* Agilent 19:16:03 Dec 21, 2016 Mkr1 2.4573125 GHz -14.9 dBm Ref 20 dBm Atten 30 dB Peak Log 10 dB/ Offst 1 dB -14.9 dBm M1 S2 S3 FC AA Center 2.462 GHz Span 25 MHz #Res BW 3 kHz #VBW 10 kHz Sweep 2.859 s (401 pts)



Page: 87 of 91

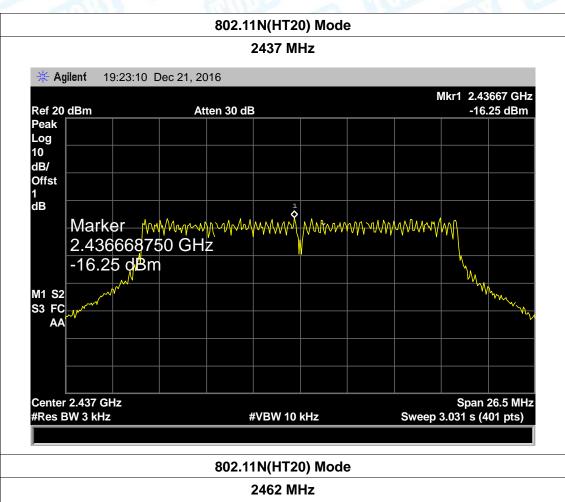
EUT:	WIFI NVF	RKIT	Model:	JF-IPC-ED2110-IR2-WS
Temperature:	25 ℃		Temperature:	<b>25</b> ℃
Test Voltage:	AC 120V/	60Hz		
Test Mode:	TX 802.1	IN(HT20) Mod	e	
Channel Frequency	uency	Power	Density	Limit
(MHz)		(3 kH	z/dBm)	(dBm)
2412		-1	6.62	
2437		-1	6.25	8
2462		-1	4.83	
		802.11N(I	HT20) Mode	
		241	2 MHz	
* Agilent 19:	22:36 Dec 21	, 2016		
Dof 20 dDw		A440 20 dD		Mkr1 2.41823 GHz
Ref 20 dBm Peak		Atten 30 dB		-16.62 dBm

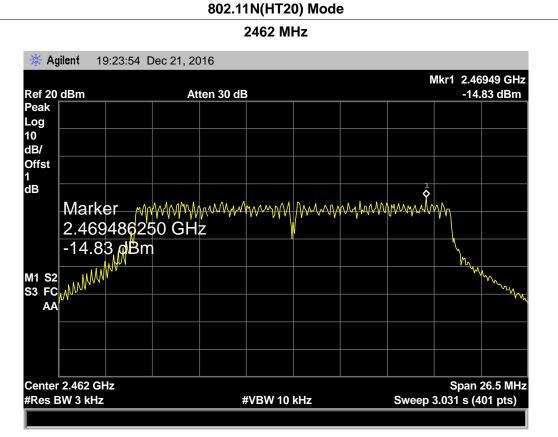






Page: 88 of 91

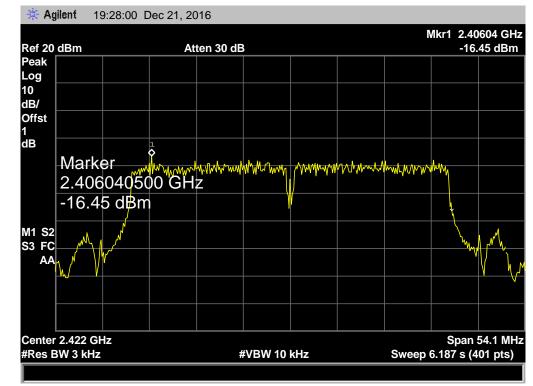


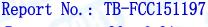




Page: 89 of 91

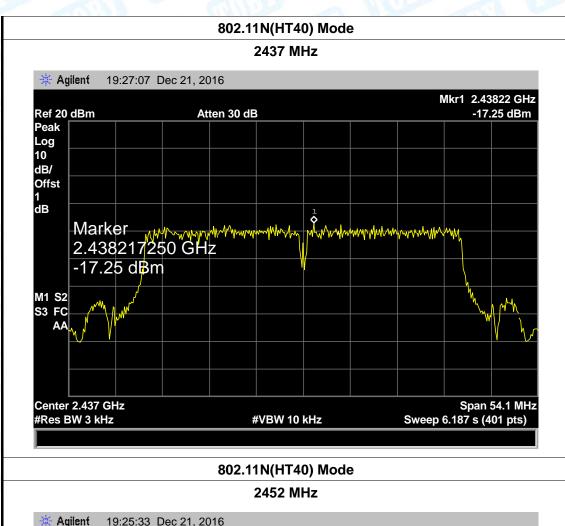
EUT:	WIFI NVF	R KIT	Model:	JF-IPC-ED2110-IR2-WS
Temperature:	25 ℃		Temperature:	<b>25</b> ℃
Test Voltage:	AC 120V	60Hz		anis s
Test Mode:	TX 802.1	IN(HT40) Mod	e	
Channel Fred	luency	Power	Density	Limit
(MHz)		(3 kH	z/dBm)	(dBm)
2422		-1	6.45	
2437		-17.25		8
2452		-16.95		
		802.11N(I	HT40) Mode	
		242	2 MHz	
* Agilent 19	:28:00 Dec 21	, 2016		
Ref 20 dBm		Atten 30 dB		Mkr1 2.40604 GHz -16.45 dBm

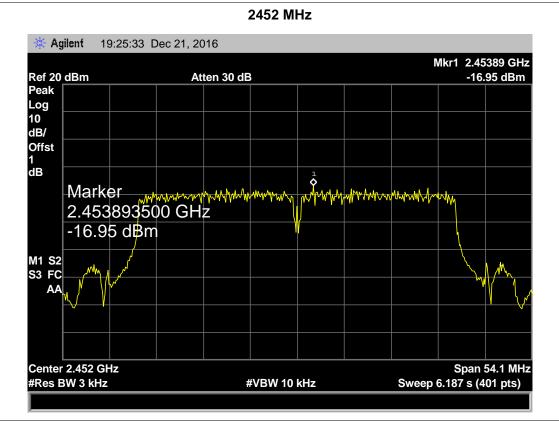






Page: 90 of 91







Page: 91 of 91

# 10. Antenna Requirement

### 10.1 Standard Requirement

10.1.1 Standard FCC Part 15.203

### 10.1.2 Requirement

An intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device. The use of a permanently attached antenna or of an antenna that uses a unique coupling to the intentional radiator shall be considered sufficient to comply with the provisions of this Section. The manufacturer may design the unit so that a broken antenna can be replaced by the user, but the use of a standard antenna jack or electrical connector is prohibited.

### 10.2 Antenna Connected Construction

The directional gains of the antenna used for transmitting is 5 dBi, and the antenna de-signed with permanent attachment and no consideration of replacement. Please see the EUT photo for details.

### Result

The EUT antenna is a Dipole Antenna. It complies with the standard requirement.

Antenna Type
☐ Permanent attached antenna
☑ Unique connector antenna
□ Professional installation antenna

----END OF REPORT----