

### CTC Laboratories, Inc.

1-2/F., Building 2, Jiaquan Building, Guanlan High-Tech Park, Shenzhen, Guangdong, China Tel: +86-755- 27521059 Fax: +86-755- 27521011 Http://www.sz-ctc.org.cn

TEST REPORT		
Report No. ·····:	CTC20221273E09	
FCC ID······:	PADWF143	
Applicant·····:	Wahoo Fitness L.L.C.	
Address:	90 W. Wieuca Road #110, Atlanta, GA	30342, United States
Manufacturer	Wahoo Fitness L.L.C.	
Address:	90 W. Wieuca Road #110, Atlanta, GA	30342, United States
Product Name······:	Wireless transceiver	
Trade Mark······	WAHOO FITNESS	
Model/Type reference······:	WF143	
Listed Model(s) ······	1	
Standard:	FCC CFR Title 47 Part 15 Subpart C	Section 15.247
Date of receipt of test sample:	Feb. 08, 2023	
Date of testing	Feb. 09, 2023 ~ Feb. 21, 2023	
Date of issue:	Jul. 21, 2023	
Result:	PASS	
Compiled by:		<del></del> C
(Printed name+signature)	Terry Su	Jerry Ju
Supervised by:		Tir zhang
(Printed name+signature)	Eric Zhang	
Approved by:		1 mas
(Printed name+signature)	Totti Zhao	100000
Testing Laboratory Name:	CTC Laboratories, Inc.	
Address	1-2/F., Building 2, Jiaquan Building, Guanlan High-Tech Park, Shenzhen, Guangdong, China	
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correspond to the test sample.



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### 1. TEST SUMMARY

### 1.1. Test Standards

The tests were performed according to following standards:

FCC Rules Part 15.247: Operation within the bands of 902-928MHz, 2400-2483.5MHz, and 5725-5850MHz.

<u>RSS 247 Issue 2:</u> Standard Specifications for Frequency Hopping Systems (FHSs) and Digital Transmission Systems (DTSs) Operating in the Bands 902-928MHz, 2400-2483.5MHz and 5725-5850MHz.

ANSI C63.10-2013: American National Standard for Testing Unlicensed Wireless Devices.

### 1.2. Report version

Revised No.	Date of issue	Description
01	Jul. 21, 2023	Original



### 1.3. Test Description

FCC Part 15 Subpart C (15.247) / RSS 247 Issue 2				
Test Item	Standard Section		Pocult	Toot Engineer
rest item	FCC	IC	Result	rest Engineer
Antenna Requirement	15.203	/	Pass	Alicia Liu
Conducted Emission	15.207	RSS-Gen 8.8	Pass	Ice Lu
Radiated Band Edge and Spurious Emissions	15.205&15.209& 15.247(d)	RSS 247 5.5	Pass	Alicia Liu
Conducted Band Edge and Spurious Emissions	15.247(d)	RSS 247 5.5	Pass	Alicia Liu
6dB Bandwidth	15.247(a)(2)	RSS 247 5.2 (a)	Pass	Alicia Liu
Conducted Max Output Power	15.247(b)(3)	RSS 247 5.4 (d)	Pass	Alicia Liu
Power Spectral Density	15.247(e)	RSS 247 5.2 (b)	Pass	Alicia Liu
Transmitter Radiated Spurious	15.209&15.247(d)	RSS 247 5.5& RSS-Gen 8.9	Pass	Alicia Liu

Note: The measurement uncertainty is not included in the test result.



### 1.4. Test Facility

#### CTC Laboratories, Inc.

Add: 1-2/F., Building 2, Jiaquan Building, Guanlan High-Tech Park, Shenzhen, Guangdong, China

#### Laboratory accreditation

The test facility is recognized, certified, or accredited by the following organizations:

#### A2LA-Lab Cert. No.: 4340.01

CTC Laboratories, Inc. EMC Laboratory has been accredited by A2LA for technical competence in the field of electrical testing, and proved to be in compliance with ISO/IEC 17025:2017 General Requirements for the Competence of Testing and Calibration Laboratories and any additional program requirements in the identified field of testing.

#### Industry Canada (Registration No.: 9783A, CAB Identifier: CN0029)

CTC Laboratories, Inc. EMC Laboratory has been registered by Certification and Engineer Bureau of Industry Canada for the performance of with Registration NO.: 9783A on Jan, 2016.

#### FCC (Registration No.: 951311, Designation Number CN1208)

CTC Laboratories, Inc. EMC Laboratory has been registered and fully described in a report filed with the (FCC) Federal Communications Commission. The acceptance letter from the FCC is maintained inour files. Registration 951311, Aug 26, 2017.

### 1.5. Measurement Uncertainty

The data and results referenced in this document are true and accurate. The reader is cautioned that there may be errors within the calibration limits of the equipment and facilities. The measurement uncertainty was calculated for all measurements listed in this test report acc. to TR-100028-01" Electromagnetic compatibility and Radio spectrum Matters (ERM); Uncertainties in the measurement of mobile radio equipment characteristics; Part 1" and TR-100028-02 "Electromagnetic compatibility and Radio spectrum Matters (ERM); Uncertainties radio equipment characteristics; Part 2" and TR-100028-02 "Electromagnetic compatibility and Radio spectrum Matters (ERM); Uncertainties in the measurement of mobile radio equipment characteristics; Part 2 " and is documented in the CTC Laboratories, Inc. quality system acc. to DIN EN ISO/IEC 17025. Furthermore, component and process variability of devices similar to that tested may result in additional deviation. The manufacturer has the sole responsibility of continued compliance of the device.

Below is the best measurement capability for CTC Laboratories, Inc.



Test Items	Measurement Uncertainty	Notes
Transmitter power conducted	0.42 dB	(1)
Transmitter power Radiated	2.14 dB	(1)
Conducted spurious emissions 9kHz~40GHz	1.60 dB	(1)
Radiated spurious emissions 9kHz~40GHz	2.20 dB	(1)
Conducted Emissions 9kHz~30MHz	3.08 dB	(1)
Radiated Emissions 30~1000MHz	4.51 dB	(1)
Radiated Emissions 1~18GHz	5.84 dB	(1)
Radiated Emissions 18~40GHz	6.12 dB	(1)
Occupied Bandwidth		(1)

**Note (1):** This uncertainty represents an expanded uncertainty expressed at approximately the 95% confidence level using a coverage factor of k=1.96.

### 1.6. Environmental conditions

During the measurement the environmental conditions were within the listed ranges:

Temperature:	21°C ~ 27°C
Relative Humidity:	40% ~ 60%
Air Pressure:	101kPa



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# 2. GENERAL INFORMATION

### 2.1. Client Information

Applicant:	Wahoo Fitness L.L.C.
Address:	90 W. Wieuca Road #110, Atlanta, GA 30342, United States
Manufacturer:	Wahoo Fitness L.L.C.
Address:	90 W. Wieuca Road #110, Atlanta, GA 30342, United States

### 2.2. General Description of EUT

Product Name:	Wireless transceiver
Trade Mark:	WAHOO FITNESS
Model/Type reference:	WF143
Listed Model(s):	
Power supply:	24Vdc/6.24A from AC/DC Adapter
Adapter mode:	SOY-2400624-094-B Input: 100-240V~ 50/60Hz 2.5A Max Output: 24Vdc/6.24A 60W
Hardware version:	1
Software version:	1
WIFI 802.11b/ g/ n(HT20)/ n(	(HT40)
WIFI 802.11b/ g/ n(HT20)/ n( Modulation:	( <b>HT40)</b> 802.11b: DSSS(CCK, DQPSK, DBPSK) 802.11g/n: OFDM(BPSK, QPSK, 16QAM, 64QAM)
WIFI 802.11b/ g/ n(HT20)/ n( Modulation: Operation frequency:	HT40) 802.11b: DSSS(CCK, DQPSK, DBPSK) 802.11g/n: OFDM(BPSK, QPSK, 16QAM, 64QAM) 802.11b/g/n(HT20): 2412MHz~2462MHz 802.11n(HT40): 2422MHz~2452MHz
WIFI 802.11b/ g/ n(HT20)/ n Modulation: Operation frequency: Channel number:	HT40)   802.11b: DSSS(CCK, DQPSK, DBPSK)   802.11g/n: OFDM(BPSK, QPSK, 16QAM, 64QAM)   802.11b/g/n(HT20): 2412MHz~2462MHz   802.11b/g/n(HT20): 2422MHz~2452MHz   802.11b/g/n(HT20): 11channels   802.11n(HT40): 7channels
WIFI 802.11b/ g/ n(HT20)/ n Modulation: Operation frequency: Channel number: Channel separation:	HT40)   802.11b: DSSS(CCK, DQPSK, DBPSK)   802.11g/n: OFDM(BPSK, QPSK, 16QAM, 64QAM)   802.11b/g/n(HT20): 2412MHz~2462MHz   802.11n(HT40): 2422MHz~2452MHz   802.11b/g/n(HT20):11channels   802.11n(HT40):7channels   5MHz
WIFI 802.11b/ g/ n(HT20)/ n Modulation: Operation frequency: Channel number: Channel separation: Antenna type:	HT40)   802.11b: DSSS(CCK, DQPSK, DBPSK)   802.11g/n: OFDM(BPSK, QPSK, 16QAM, 64QAM)   802.11b/g/n(HT20): 2412MHz~2462MHz   802.11n(HT40): 2422MHz~2452MHz   802.11b/g/n(HT20):11channels   802.11n(HT40):7channels   5MHz   FPC Antenna



### 2.3. Accessory Equipment information

Equipment Information			
Name	Model	S/N	Manufacturer
Notebook	ThinkBook 14G3 ACL	MP246QDR	Lenovo
1	1	1	1
Cable Information			
Name	Shielded Type	Ferrite Core	Length
1	1	1	1
1	1	1	1
Test Software Information			
Name	Software version	1	1
EspRFTestTool_v2.8_Ma nual.exe	v2.8	1	1



### 2.4. Operation state

Operation Frequency List: The EUT has been tested under typical operating condition. The Applicant provides communication tools software to control the EUT for staying in continuous transmitting and receiving mode for testing.

**Operation Frequency List:** 

Channel	Frequency (MHz)
01	2412
02	2417
03	2422
04	2427
05	2432
06	2437
07	2442
08	2447
09	2452
10	2457
11	2462

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

Test Mode	Frequency[MHz]	Test software Power Settings
	2412	10
802.11b	2437	10
	2462	8
	2412	10
802.11g	2437	10
	2462	8
	2412	8
802.11n(HT20)	2437	8
	2462	8
802.11n(HT40)	2422	8
	2437	8
	2452	8



#### Data Rated

Preliminary tests were performed in different data rate, and found which the below bit rate is worst case mode, so only show data which it is a worst case mode.

Mode	Data rate (worst mode)
802.11b	1Mbps
802.11g	6Mbps
802.11n(HT20)	HT-MCS0
802.11n(HT40)	HT-MCS0

Test mode

For RF test items:

The engineering test program was provided and enabled to make EUT continuous transmit.

For AC power line conducted emissions:

The EUT was set to connect with the WLAN AP under large package sizes transmission.

For Radiated spurious emissions test item:

The engineering test program was provided and enabled to make EUT continuous transmit. The EUT in each of three orthogonal axis emissions had been tested, but only the worst case (X axis) data Recorded in the report.



#### **Measurement Instruments List** 2.5.

Tonsce	end JS0806-2 Test system				
Item	Test Equipment	Manufacturer	Model No.	Serial No.	Calibrated until
1	MXA Signal Analyzer	Keysight	N9020A	MY46471737	Dec. 16, 2023
2	Spectrum Analyzer	R&S	FSU26	100105	Dec. 16, 2023
3	Spectrum Analyzer	R&S	FSV40-N	101331	Mar. 14, 2024
4	MXG Vector Signal Generator	Agilent	N5182A	MY47420864	Dec. 16, 2023
5	PSG Analog Signal Generator	Agilent	E8257D	MY46521908	Dec. 16, 2023
6	Power Sensor	Keysight	U2021XA	MY55130004	Mar. 14, 2024
7	Power Sensor	Keysight	U2021XA	MY55130006	Mar. 14, 2024
8	Wideband Radio Communication Tester	R&S	CMW500	102414	Dec. 16, 2023
9	High and low temperature box	ESPEC	MT3035	1	Mar. 24, 2024
10	JS1120 RF Test system	TONSCEND	v2.6	/	/

Radiate	Radiated emission(3m chamber 2)									
Item	Test Equipment	Manufacturer	Model No.	Serial No.	Calibrated Until					
1	Trilog-Broadband Antenna	Schwarzbeck	VULB 9168	9168-1013	Dec. 07, 2024					
2	Horn Antenna	Schwarzbeck	BBHA 9120D 9120D-647		Dec. 07, 2024					
3	Loop Antenna	LAPLAC	RF300	9138	Dec. 16, 2023					
4	Spectrum Analyzer	R&S	FSU26	100105	Dec. 16, 2023					
5	Spectrum Analyzer	R&S	FSV40-N	101331	Mar. 14, 2024					
6	Pre-Amplifier	SONOMA	310	186194	Dec. 16, 2023					
7	Low Noise Pre-Amplifier	EMCI	EMC051835	980075	Dec. 16, 2023					
8	Test Receiver	R&S	ESCI7	100967	Dec. 16, 2023					
9	3m chamber 2	Frankonia	EE025	/	Oct. 23, 2024					

Radiate	Radiated emission(3m chamber 3)									
Item	Test Equipment	Manufacturer Model No.		Serial No.	Calibrated Until					
1	Trilog-Broadband Antenna	Schwarzbeck	VULB 9163	01026	Dec. 18, 2024					
2	Horn Antenna	Schwarzbeck	BBHA 9120D	9120D-647	Dec. 01, 2024					
3	Test Receiver	Keysight	N9038A	MY56400071	Dec. 16, 2023					
4	Broadband Premplifier	SCHWARZBECK	BBV9743B	259	Dec. 16, 2023					
5	Mirowave Broadband Amplifier	SCHWARZBECK	BBV9718C	111	Dec. 16, 2023					
6	Pre-Amplifier	R&S	SCU-26	10033	Dec. 16, 2023					
7	Pre-Amplifier	R&S	SCU-40	10030	Dec. 16, 2023					
8	Board-Band Horn Antenna	Schwarzbeck	BBHA 9170	BBHA 9170-497	Dec. 16, 2023					
9	3m chamber 3	YIHENG	EE106	/	Sep. 09, 2023					

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Condu	Conducted Emission								
Item	Test Equipment	Manufacturer	Manufacturer Model No.		Calibrated until				
1	LISN	R&S	ENV216	101112	Dec. 16, 2023				
2	LISN	R&S	ENV216	101113	Dec. 16, 2023				
3	EMI Test Receiver	R&S	ESCS30	100353	Dec. 16, 2023				

Note: 1. The Cal. Interval was one year.

2. The Cal. Interval was three year of the chamber

3. The cable loss has calculated in test result which connection between each test instruments.



## 3. TEST ITEM AND RESULTS

### 3.1. Conducted Emission

### <u>Limit</u>

### FCC CFR Title 47 Part 15 Subpart C Section 15.207/ RSS - Gen 8.8:

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				

\* Decreases with the logarithm of the frequency.

#### **Test Configuration**



### Note: 1.Support units were connected to second LISN. 2.Both of LISNs (AMN) are 80 cm from EUT and at least 80 from other units and other metal planes

#### Test Procedure

1. The EUT was setup according to ANSI C63.10:2013 requirements.

2. The EUT was placed on a platform of nominal size, 1 m by 1.5 m, raised 10 cm above the conducting ground plane. The vertical conducting plane was located 40 cm to the rear of the EUT. All other surfaces of EUT were at least 10 cm from any other grounded conducting surface.

3. The EUT and simulators are connected to the main power through a line impedances stabilization network (LISN). The LISN provides a 500hm /50uH coupling impedance for the measuring equipment. The peripheral devices are also connected to the main power through a LISN. (Please refer to the block diagram of the test setup and photographs)

4. Each current-carrying conductor of the EUT power cord, except the ground (safety) conductor, was individually connected through a LISN to the input power source.

5. The excess length of the power cord between the EUT and the LISN receptacle were folded back and forth at the center of the lead to form a bundle not exceeding 40 cm in length.

6. Conducted Emissions were investigated over the frequency range from 0.15MHz to 30MHz using a receiver bandwidth of 9 kHz.

7. During the above scans, the emissions were maximized by cable manipulation.





#### Test Mode:

Please refer to the clause 2.4.

#### Test Results





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Test Voltag	e: AC	120V/60	Hz						
Terminal:	Ne	utral							
120									
100-									
80-									
률 60-						_		FCC Pa	rt15 B Q P
		W Harry W	N. (1991)				///		h.AL.N
20-				r Hannielen	un l'un		Manny	Minim	wyw
0-					hert a distant				
-20									
150k	300	400 500	800 1M	2N Eroquoi	I 3M acvin.⊟	4M 5N	16 81	OM	20M 30M
Einal Ma	acuro	mont D	otoctor	1		12			
Frequency (MHz)	QuasiPeal (dBµ V)	Meas. Time (ms)	Bandwidth (kHz)	n Filte	r Line	e Corr (dB	: Margin ) (dB)	n Limit (dBµ V)	Comment
0.245100	40.	9 1000.00	9.00	0 On	N	10.	0 21.1	1 61.9	
4.854620	38.	3 1000.00	9.00	0 On	N	10.	0 17.	7 56.0	
4.992190	39.	0 1000.00	9.00	U	IN	10.	0 16.4	4 50.0	
Final Me	asuren	nent De	tector 2						
Frequency (MHz)	Average (dBµ V)	Meas. Time (ms)	Bandwidth (kHz)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBµ V)	Comment
0.245100	16.7	1000.00	9.000	On	N	10.0	35.2	51.9	
0.599360	12.5	1000.00	9.000	On	N	10.0	33.5	46.0	
4.992190	21.2	1000.00	9.000	On	N	10.0	18.8	46.0	

Emission Level= Read Level+ Correct Factor



### 3.2. Radiated Emission

<u>Limit</u>

#### FCC CFR Title 47 Part 15 Subpart C Section 15.209/ RSS – Gen 8.9:

Frequency	Limit (dBuV/m @3m)	Value		
30 MHz ~ 88 MHz	40.00	Quasi-peak		
88 MHz ~ 216 MHz	43.50	Quasi-peak		
216 MHz ~ 960 MHz	46.00	Quasi-peak		
960 MHz ~ 1 GHz	54.00	Quasi-peak		
	54.00	Average		
Above i GHZ	74.00	Peak		

#### Note:

(1) The tighter limit applies at the band edges.

(2) Emission Level (dBuV/m)=20log Emission Level (uV/m).

#### Test Configuration



#### Below 30MHz Test Setup



#### Below 1000MHz Test Setup







Above 1GHz Test Setup

#### Test Procedure

1. The EUT was setup and tested according to ANSI C63.10:2013

2. The EUT is placed on a turn table which is 0.1 meter above ground for below 1 GHz, and 0.1 m for above 1 GHz. The turn table is rotated 360 degrees to determine the position of the maximum emission level.

3. The EUT was set 3 meters from the receiving antenna, which was mounted on the top of a variable height antenna tower.

4. For each suspected emission, the EUT was arranged to its worst case and then tune the Antenna tower (from 1 m to 4 m) and turntable (from 0 degree to 360 degrees) to find the maximum reading. A pre-amp and a high pass filter are used for the test in order to get better signal level to comply with the guidelines.

5. Set to the maximum power setting and enable the EUT transmit continuously.

- 6. Use the following spectrum analyzer settings
- (1) Span shall wide enough to fully capture the emission being measured;

(2) Below 1 GHz:

RBW=120 kHz, VBW=300 kHz, Sweep=auto, Detector function=peak, Trace=max hold;

If the emission level of the EUT measured by the peak detector is 3 dB lower than the applicable limit, the peak emission level will be reported. Otherwise, the emission measurement will be repeated using the quasi-peak detector and reported.

(3) From 1 GHz to 10<sup>th</sup> harmonic:

RBW=1MHz, VBW=3MHz Peak detector for Peak value.

RBW=1MHz, VBW $\geq$ 1/T Peak detector for Average value.

Note 1: For the 1/T& Duty Cycle please refer to clause 3.8 Duty Cycle.

#### <u>Test Mode</u>

Please refer to the clause 2.4.

#### <u>Test Result</u>

#### 9 KHz~30 MHz

From 9 KHz to 30 MHz: 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.











|--|

Ant	. Pol		Horiz	zonta	al							
Test	t Mo	de:	TX 8	02.1	11b Moo	le 2412	MHz	Z				
Ren	nark	:	No re prese	epor cribe	t for the ed limit.	e emissi	on v	vhich	more t	han 10 dB l	pelow the	;
120.0	) dBu	V/m										
110												
100												
90												
80									500		- D 4h 1	O DK
70									FUU	Partis RE-Clas	S B ADOVE I	GPK
60												
50									FCC	Part15 RE-Clas	s B Above 1	<u>G AV</u>
40		z										
30		1										
20		×										
10												
0.0												
10	00.000	3500.00 6	000.00	850	0.00 11	000.00 (	MHz)	160	00.00 1	18500.00 2100	0.00 23500	.00 26000.0
N	о.	Frequer (MHz	ncy Reading :) (dBuV)		Fact (dB/n	or n)	Le (dBu	vel V/m)	Limit (dBuV/m)	Margin (dB)	Detector	
1	*	4823.5	14	2	5.39	2.20	)	27	.59	54.00	-26.41	AVG
2	2	4824.4	69	3	7.10	2.20	)	39	.30	74.00	-34.70	peak
	1											L
Ren	narks	8: (dB/m) = 4	Anton	no E	actor (r	B/m)⊥(	`ahl	e Eac	tor (dE	)_Dra amali	fior East	Nr.

2.Margin value = Level -Limit value

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Ant	. Po	I.	Vert	ical										
Tes	t Mo	de:	TX 8	302.´	11b Moo	le 2412	2MHz	Z						
Rer	nark	:	No r pres	epoi cribe	rt for the ed limit.	e emiss	ion v	vhich	more t	han 10 c	IB b	elow the	;	
120.	0 dBi	ıV/m												
110											_			
100														
90														
80														
70									FCC	Part15 RE-0	lass	B Above 1	G PK	
60														
50									FCC	Part15 RE-0	lass	B Above 1	<u>G AV</u>	
10		2												
40		×												
30		×												
20														
10														
10	00.000	0 3500.00 (	000.00	850	0.00 11	000.00	(MHz)	160	00.00 1	8500.00 2	1000	.00 23500	.00 260	00.0
	1000.000 3500.00 0000.00 0500.00 11000.00 (MFR2) 10000.00 10500.00 21000.00 25500.00 26000.0													
N	o.	Frequer (MHz	ncy )	Re (d	ading BuV)	Fac (dB/i	tor n)	Le (dBu	vel iV/m)	Limit (dBuV/	m)	Margin (dB)	Detect	tor
1	*	4824.2	83	2	5.70	2.2	0	27	.90	54.00	)	-26.10	AVC	3
2	2	4824.4	59	3	6.83	2.2	0	39	.03	74.00	)	-34.97	pea	k
				-										<u>.</u>

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Ant. Pol	-	Horiz	zontal					
Test Mo	de:	TX 8	02.11b Mod	le 2437MHz	2			
Remark	:	No re	eport for the cribed limit.	emission w	which more t	han 10 dB b	elow the	
120.0 dBu	V/m							
110								
110								
100								
90								
80					FCC I	Part15 RE-Class	B Above 1	G PK
70								
60								
50					FCC	Part15 RE-Class	B Above 1	GAV
40	ç							
30	1							
20	×							
20								
10								
1000.000	3500.00 6	000.00	8500.00 11	000.00 (MHz)	16000.00 1	8500.00 21000	.00 23500.	00 26000.0
<u>I</u>								
No.	Freque (MHz	ncy z)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
1 *	4873.6	517	26.21	2.30	28.51	54.00	-25.49	AVG
2	4874.3	846	37.79	2.30	40.09	74.00	-33.91	peak
Remarks	2.							<u> </u>



			Pa	ge 23 0	f 99			Re	eport r	10.: C	10202	212
Ant. Po	I.	Vert	ical									
Test Mo	ode:	TX	TX 802.11b Mode 2437MHz No report for the emission which more than 10 dB below the prescribed limit									
Remark	K:	No i pres										
120.0 dB	ıV/m											1
110												
100												
an												
20												
							FCC F	art15 RE-Class B Above 1G PK				
							FCC F	art15 RE	-Class E	Above	IG AV	1
50	1											
10	×											
30	Š											
20												
1000.00	0 3500.00	6000.00	8500.00	11000.00	(MHz)	1600	0.00 18	3500.00	21000.0	0 23500	0.00 26	 000.

No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
1	4873.703	37.02	2.30	39.32	74.00	-34.68	peak
2 *	4874.331	26.12	2.30	28.42	54.00	-25.58	AVG

FN



Ant	. Pol		Hori	zont	al							
Tes	t Mo	de:	TX 8	802.´	11b Mod	le 2462N	ЛНz	Z				
Rer	nark:		No r pres	epor cribe	rt for the ed limit.	emissio	on v	vhich	more t	han 10 dB l	pelow the	
120.0	) dBu'	V/m										
110												
100												
90												
70									FCC	Part15 RE-Clas	s B Above 1	G PK
/U												
60									FCC	Part15 RE-Clas	s B Above 1	G AV
50		1										
40		×										
30		Š										
20							-					
10							-					
0.0  10	00.000	3500.00 6	000.00	850	0.00 11	000.00 (N	IHz)	160	00.00 1	8500.00 2100	0.00 23500	.00 26000.0
		Freque	ncy	Re	ading	Facto	or	Le	vel	Limit	Margin	Detector
	NO.	(MHz	:)	(d	BuV)	(dB/m	1)	(dBu	iV/m)	(dBuV/m)	(dB)	Delector
	1	4923.9	66	3	6.91	2.41		39	.32	74.00	-34.68	peak
2	2 *	4924.3	09	2	5.49	2.41		27	.90	54.00	-26.10	AVG
	1			<u> </u>				<u> </u>		1	1	

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Remarks:



Ant	. Pol		Verti	cal								
Tes	t Mo	de:	TX 8	02.1	11b Mod	le 2462	2MHz	Z				
Ren	nark	:	No re	epor cribe	t for the ed limit.	e emiss	ion v	vhich	more t	han 10 dB t	pelow the	;
120.0	) dBu	lV/m										
110												
100												
90												
80												
70									FCC	Part15 RE-Clas	s B Above 1	G PK
60												
50									FCC	Part15 RE-Clas	s B Above 1	G AV
40		2										
40		×										
30		×										
20												
10			_									
10	00.000	3500.00 6	000.00	850	0.00 11	000.00	(MHz)	160	00.00	18500.00 2100	0.00 23500	.00 26000.0
N	lo.	Frequer (MHz	ncy )	Re (d	ading BuV)	Fac (dB/	tor m)	Le (dBu	vel V/m)	Limit (dBuV/m)	Margin (dB)	Detector
1	*	4923.7	93	2	5.46	2.4	1	27	.87	54.00	-26.13	AVG
2	2	4924.2	68	3	7.48	2.4	1	39	.89	74.00	-34.11	peak
L												L
Ren	narks	S:										



Ant	. Pol		Hori	zonta	al								
Tes	t Mo	de:	TX 8	302.1	1g Moo	de 2412M	Hz	2					
Ren	nark	:	No r pres	epor cribe	t for the ed limit.	e emissior	ר א	/hich ı	nore t	han 10 dB t	pelow the	!	
120.	0 dBu	ıV/m											
110													
100													
90													
80									500		- D 4h 1	C DK	
70									FUU	Partis RE-Clas	S D ADOVE I	GPK	
60													
50									FCC	Part15 RE-Clas	s B Above 1	GAV	
40		2											
30		1											
20		^											
10													
0.0													
10	100.000	3500.00	6000.00	850	10.00 11	1000.00 (MI	Hz)	160	00.00	18500.00 2100	0.00 23500	.00 2600	JU.U
,													
N	lo.	Freque (MHz	ncy :)	Re (dl	ading BuV)	Factor (dB/m)	r )	Le (dBu	vel V/m)	Limit (dBuV/m)	Margin (dB)	Detecto	or
1	*	4823.9	11	2	5.45	2.20		27	.65	54.00	-26.35	AVG	
2	2	4823.9	30	3	7.04	2.20		39	.24	74.00	-34.76	peak	:
	I			I									



nt. Poi	•	Verti	cal					
est Mo	de:	TX 8	02.11g Mod	le 2412MHz	Z			
emark		No ro pres	eport for the cribed limit.	emission v	vhich more t	han 10 dB t	pelow the	;
0.0 dBu	//m							
_								
,								
		_						
					FCC	Part15 RE-Clas	s B Above 1	G PK
					ECC	Part15 BE-Clas	s B Above 1	GAV
							5 5 7 50 7 5 1	
	2							
	1							
	×							
o								
1000.000	3500.00 6	000.00	8500.00 11	000.00 (MHz)	16000.00 1	8500.00 21000	0.00 23500	.00 2600
No	Freque	ncy	Reading	Factor	Level	Limit	Margin	Detecto
No.	Freque (MH:	ncy z)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detecto
No. 1 *	Freque (MH: 4823.6	ncy z) 628	Reading (dBuV) 25.65	Factor (dB/m) 2.20	Level (dBuV/m) 27.85	Limit (dBuV/m) 54.00	Margin (dB) -26.15	Detecto AVG

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Remarks:

ΞN



Ant. Po	I.	Hori	zontal					
fest Mo	ode:	ТХ 8	302.11g Moo	de 2437MHz	2			
Remark	K:	No r pres	eport for the cribed limit.	e emission v	vhich more t	han 10 dB b	elow the	
20.0 dB	ıV/m							
10		_						
00								
,								
0								
, —					FCC	Part15 RE-Class	s B Above 1	G PK
					FCC	Part15 RE-Class	s B Above 1	GAV
	1							
	2	_						
	×							
n								
).0								
1000.00	0 3500.00 6	000.00	8500.00 11	000.00 (MHz)	16000.00 1	8500.00 21000	0.00 23500	.00 26000.
1000.00	Erecue	ncv	Reading	Factor	Level	Limit	Margin	Detecto
No.	/MU-	1		(dD/m)				
No.	(MHz	:)	(dBuV)	(dB/m)	(dBuV/m)	(dBuV/m)	(dB)	
No. 1	(MHz 4873.7	:) 43	(dBuV) 38.62	(dB/m) 2.30	(dBuV/m) 40.92	(dBuV/m) 74.00	(dB) -33.08	peak

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Remarks:

ΞN





Ant. F	Pol.		Verti	cal											
Test I	Mode:		TX 8	02.1	11q Mod	de 243	37MHz	Z							
Rema	ark:		No ro	epor cribe	t for the	e emis	sion v	vhich	more t	han 10	dB k	below	the		
120.0	dBuV/m														
110															
100															
90															
80									FCC	Part15 RE	E-Clas	s B Abov	/e 10	i PK	
70															
60									FCC	Part15 BF	-Clas	s B Aboy	/e 16		
50															
40		Š													
30		-1													
20		<u>^</u>													
10															
0.0															
1000.	.000 3500	0.00 60	00.00	850	0.00 11	000.00	(MHz)	160	00.00 1	8500.00	2100	0.00 23	500.0	0 260	)0.0
No.	. Fr	equen (MHz)	су	Re (d	ading BuV)	Fac (dB	ctor /m)	Le (dBu	vel iV/m)	Lim (dBu∖	it //m)	Marg (dB)	in )	Detect	or
1	* 48	874.06	8	2	6.06	2.3	30	28	.36	54.0	00	-25.6	4	AVG	;
2	48	874.10	8	3	7.80	2.3	30	40	.10	74.0	00	-33.9	0	peak	<b>(</b>
						-		-							



Ant. Pol		Horiz	zontal					
Test Mo	de:	TX 8	02.11g Mod	e 2462MHz	2			
Remark	:	No re	eport for the cribed limit.	emission w	vhich more t	han 10 dB t	pelow the	;
120.0 dBu	V/m							
110								
100								
90								
80					FCC	Part15 BF-Clas	s B Ahove 1	G PK
70								
60					F00		- D 41	C 11/
50						Partis RE-Clas	S D ADOVE I	
40	1×							
30	ş							
20								
10								
	3500.00 6	000.00	8500.00 11	00.00 (MHz)	16000.00 1	8500.00 2100	00 23500	00 26000 0
No.	Freque (MHz	ncy :)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
1	4923.7	97	37.28	2.41	39.69	74.00	-34.31	peak
2 *	4924.3	38	25.71	2.41	28.12	54.00	-25.88	AVG
		1				·		I.

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Remarks:



a: TX 8 No ru pres	eport for the cribed limit.	emission v	z vhich more t	han 10 dB b	pelow the	
			FCC	Part15 RE-Clas		
			FCC	Part15 RE-Clas		
			FCC	Part15 RE-Clas		
			FCC	Part15 RE-Clas	- D 4h 1	
			FCC	Part15 RE-Clas	- D 4h 1	
			FCC	Part15 RE-Clas	- D 41 - 1	
					S B ADOVE I	G PK
			FCC	Part15 BE-Clas	s B Above 1	GAV
×						
1						
^						
500.00 6000.00	8500.00 11	000.00 (MHz)	16000.00	8500.00 21000	0.00 23500	.00 2600
Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detecto
4923.685	25.43	2.41	27.84	54.00	-26.16	AVG
4923.715	36.73	2.41	39.14	74.00	-34.86	peak
Fre (I 492 492	quency MHz) 23.685 23.715	quency MHz)Reading (dBuV)23.68525.4323.71536.73	quency MHz)Reading (dBuV)Factor (dB/m)23.68525.432.4123.71536.732.41	quency MHz)Reading (dBuV)Factor (dB/m)Level (dBuV/m)23.68525.432.4127.8423.71536.732.4139.14	quency MHz)Reading (dBuV)Factor (dB/m)Level (dBuV/m)Limit (dBuV/m)23.68525.432.4127.8454.0023.71536.732.4139.1474.00	quency MHz)Reading (dBuV)Factor (dB/m)Level (dBuV/m)Limit (dBuV/m)Margin (dB)23.68525.432.4127.8454.00-26.1623.71536.732.4139.1474.00-34.86

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Ant	. Pol		Hori	zont	al							
Tes	t Mo	de:	TX 8	802.1	1n(HT2	20) Mode	e 24	I2M⊦	lz			
Rer	nark	:	No r pres	epor cribe	t for the ed limit.	e emissio	on v	vhich ı	nore t	han 10 dB l	pelow the	
120.	) dBu	V/m										
110												
100			_									
90												
80												
70									FCC	Part15 RE-Clas	s B Above 1	G PK
60												
50									FCC	Part15 RE-Clas	s B Above 1	<u>G AV</u>
40		2										
20		×										
30		×										
20												
10 0 0												
10	00.000	3500.00 6	000.00	850	0.00 11	000.00 (N	(Hz)	160	00.00 1	18500.00 2100	0.00 23500	.00 26000.0
N	lo.	Frequer (MHz	ncy )	Re (d	ading BuV)	Facto (dB/m	or 1)	Le (dBu	vel V/m)	Limit (dBuV/m)	Margin (dB)	Detector
1	*	4823.5	07	2	5.59	2.20		27	.79	54.00	-26.21	AVG
	2	4824.1	09	3	7.21	2.20		39	.41	74.00	-34.59	peak
								1		1		L
_												

EN



Ant. P	ol.	Vertica						
Test M	ode:	TX 802	.11n(HT2	20) Mode 24	412MHz			
Remar	k:	No rep prescri	ort for the	e emission v	which more 1	than 10 dB I	below the	;
120.0 dE	Bu∀/m							
110								
100								
90								
00								
70					FCC	Part15 RE-Clas	s B Above 1	G PK
/0								
60					FCC	Part15 RE-Clas	s B Above 1	GAV
50	2							
40	\$							
30	X							
20								
10								
1000.0	00 3500.00 6	000.00 8	500.00 11	000.00 (MHz)	16000.00	18500.00 2100	0.00 23500	.00 26000.0
Ne	Frequer	ncy R	eading	Factor	Level	Limit	Margin	Detector
INO.	(MHz	) (	dBuV)	(dB/m)	(dBuV/m)	(dBuV/m)	(dB)	Detector
1 *	4823.5	87	25.78	2.20	27.98	54.00	-26.02	AVG
2	4824.3	67	36.98	2.20	39.18	74.00	-34.82	peak
_								

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Remarks:



Ant. Pol		Horiz	ontal					
lest Mo	de:	TX 8	02.11n(HT2	20) Mode 24	437MHz			
Remark	:	No re	eport for the cribed limit.	emission v	which more t	han 10 dB t	pelow the	;
20.0 dBu	IV/m							
10		_						
00		_						
30								
30					FCC	Part15 RE-Clas	s B Above 1	G PK
70								
60					ECC	Dert15 DE-Clea	a R Abovo 1	C AV
50		_				Failis RE-Cias	S D ADUVE I	
40	Š							
30	×							
20								
10								
0.0	) 3500.00 6	000.00	8500.00 11	000.00 (MHz)	16000.00	18500.00 2100	0.00 23500	.00 26000.
<u>.</u>								
No.	Freque (MHz	ncy :)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
1 *	4873.5	21	26.34	2.30	28.64	54.00	-25.36	AVG
2	4874.3	20	38.22	2.30	40.52	74.00	-33.48	peak

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Remarks:





Ant.	Pol		Vert	ical								
Test	Мо	de:	TX 8	302.1	11n(HT2	20) Moc	le 24	I37MI	Ηz			
Rem	ark:		No r	epo	rt for the ed limit.	e emiss	ion v	vhich	more t	han 10 dB	below the	•
120.0	dBu\	//m										
110												
100												
90												
80												
70									FCC	Part15 RE-Cla	ss B Above 1	G PK
60												
50									FCC	Part15 RE-Cle	<u>ss B Above 1</u>	<u>G AV</u>
40		1										
20		× ç										
20		×										
10												
0.0												
100	0.000	3500.00	000.00	850	0.00 11	000.00 (	MHz)	160	00.00 1	8500.00 210	00.00 23500	.00 26000.0
No	D.	Freque (MHz	ncy z)	Re (d	eading BuV)	Fact (dB/r	tor n)	Le (dBı	evel iV/m)	Limit (dBuV/m	Margin ) (dB)	Detector
1		4873.903 37.49		7.49	2.3	D	39	.79	74.00	-34.21	peak	
2	*	* 4873.907 26.26		6.26	2.3	0	28	.56	54.00	-25.44	AVG	
						2.01				04.00	20.44	



Ant. Po	I.	Horizontal TX 802.11n(HT20) Mode 2462MHz												
Test Mo	ode:	ТХ	302.11n(HT	20) Mode 2	462MHz									
Remark	(:	No i pres	report for the scribed limit.	e emission	which more	than 10 dB	below the	9						
120.0 dB	uV/m	p												
110														
00														
0														
0					FCC	CPart15 RE-Cla	ss B Above	1G PK						
'0 <u> </u>														
io					ECC	Ded1E DE-Cle		10 41						
io 📃							SS D ADUVE							
10	1													
	2													
	×													
0														
1000.00	0 3500.00 E	6000.00	8500.00 1	1000.00 (MHz	) 16000.00	18500.00 210	00.00 2350	0.00 26000						
	<b>F</b>		Desting	Fratra	1	1 500 14								
No.	No. Frequen (MHz)		Reading (dBuV)	(dB/m)	(dBuV/m)	(dBuV/m)	(dB)	Detector						
1	4923.8	02	36.95	2.41	39.36	74.00	-34.64	peak						
2 *	4924.2	71	25.47	2.41	27.88	54.00	-26.12	AVG						
	1													

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Remarks:





Ant	. Pol		Verti	ertical K 802.11n(HT20) Mode 2462MHz											
Tes	t Mo	de:	TX 8	02.1	l1n(HT2	20) Mod	e 24	162MF	Ηz						
Rer	nark	:	No res	epor cribe	t for the ed limit.	e emissi	on v	vhich	more t	han 10 dB l	pelow the	;			
120.	0 dBu	ıV/m													
110							_								
100							_								
90															
80															
70									FCC	Part15 RE-Clas	s B Above 1	G PK			
60															
50									FCC	Part15 RE-Clas	s B Above 1	<u>G AV</u>			
40		1													
20	× ž														
30		Š													
20															
10															
10	) 00.000	) 3500.00 6	000.00	850	0.00 11	A) 00.000	/Hz)	160	00.00 1	8500.00 21000	0.00 23500	.00 26000.0			
1		1				1		1							
N	No. Frequency Readin (MHz) (dBuV			ading BuV)	Factor (dB/m)		Level (dBuV/m)		Limit (dBuV/m)	Margin (dB)	Detector				
	1	1 4923.788 3		3	7.98	2.41		40	.39	74.00	-33.61	peak			
2	2 *	4924.145 25.62		2.41		28	.03	54.00	-25.97	AVG					
						1				1		L			
Rer	narks	S:													



Ant	. Pol		Horiz	izontal 802 11p(HT40) Mode 2422MHz											
Tes	t Mod	de:	TX 8	02.1	1n(HT4	0) Mode	e 24	22MF	łz						
Ren	nark:		No re	epor cribe	t for the ed limit.	emissio	on v	hich	more t	han 10 dB	below the	;			
120.	0 dBu	V/m													
110							_								
100															
90															
80															
70									FCC	Part15 RE-Clas	s B Above 1	G PK			
60															
50				FCC Part15 RE-Class B Above 1G AV											
30 ∡∩		2		FCC Part15 RE-Class B Above 1G											
30		1													
20		×													
20															
0.0															
10	000.000	3500.00	000.00	850	0.00 11	000.00 (N	(Hz)	160	00.00 1	8500.00 2100	0.00 23500	.00 26000.0			
		Freque		Po	ading	Fact			vel	Limit	Margin				
N	lo.	(MHz	:)	(d	BuV)	(dB/n	ול ו)	(dBu	vei Ⅳ/m)	(dBuV/m)	(dB)	Detector			
	1 *	4844.2	59	2	6.14	2.24		28	.38	54.00	-25.62	AVG			
	2	4844.3	27	3	7.42	2.24		39	.66	74.00	-34.34	peak			

EN



FN

Ant	t. Pol		Verti	rtical ( 802 11n(HT40) Mode 2422MHz									
Tes	st Mo	de:	TX 8	02.1	1n(HT4	0) Mod	e 24	22MI	Ηz				
Rer	mark	:	No re prese	eport cribe	t for the d limit.	e emissi	on v	vhich	more t	han 10 dB t	pelow the	;	
120.( 	) dBu\	//m											
110 100													
90													
80									FCC I	Part15 RE-Class	B Above 1	G PK	
70													
60									FCC	Dert1E DE-Class	P About 1	CAV	
50											S D ADOVE I		
40		×											
30													
20			\$										
10													
0.0													
10	100.000	3500.00 60	100.00	8500	.00 110	000.00 (N	IHz)	160	00.00 1	8500.00 21000	.00 23500.	00 26000.U	
1	۷o.	Frequer (MHz	ncy )	Rea (dE	ading BuV)	Facto (dB/n	or n)	Le (dBu	vel iV/m)	Limit (dBuV/m)	Margin (dB)	Detector	
	1	4844.3	1844.337 38.04			2.24		40	.28	74.00	-33.72	peak	
	2 *	4844.3	44.390 26.21		2.24		28	.45	54.00	-25.55	AVG		
Rer	Remarks:						1				L		

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Ant	. Pol		Horiz	zont	al							
Tes	t Moo	de:	TX 8	02.1	11n(HT4	0) Mode	24	37MF	Ηz			
Ren	nark:		No re prese	epor cribe	t for the ed limit.	emissio	n w	/hich	more t	han 10 dB l	pelow the	•
120.0	) dBu'	√/m										
110 100												
90												
80									FCC	Part15 BF-Clas	s B Ahove 1	G PK
70									100		3 8 7 80 7 6 1	
60									500			
50									FUU	Part15 RE-Clas	s B Above I	GAV
40												
30		1										
20	×											
10												
0.0	00.000	2500.00	000.00	050	0.00 11	000.00 01		100	00.00 1	0500.00.0100	0.00 02500	
·												
Ν	No.	Freque (MH	ency z)	Re (d	eading IBuV)	Facto (dB/m	)	Le (dBu	evel uV/m)	Limit (dBuV/m)	Margin (dB)	Detector
	1 *	4873.	790	2	6.20	2.30		28	.50	54.00	-25.50	AVG
	2	4874.	182	3	7.25	2.30		39	.55	74.00	-34.45	peak
Ren	Pomarke:											

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Ant. Pol.   Vertical     Test Mode:   TX 802.11n(HT40) Mode 2437MHz											
Test Mo	de:	TX 8	02.11n(HT4	10) Mode 24	437MHz						
Remark		No re prese	eport for the cribed limit.	e emission v	which more	than 10 dB l	below the	9			
120.0 dBu	V/m										
110											
100											
90											
80											
70					FCC	Part15 RE-Clas	s B Above 1	G PK			
60											
E0					FCC	Part15 RE-Clas	s B Above 1	G AV			
10	1										
40	×										
30	×										
20											
10											
1000.000	3500.00 6	000.00	8500.00 11	000.00 (MHz)	16000.00	8500.00 2100	0.00 23500	.00 26000.0			
No.	lo. Frequency Reading (MHz) (dBuV)			Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector			
1	4873.5	571 37.95		2.30	40.25	74.00	-33.75	peak			
2 *	4874.332 26.03		26.03	2.30	28.33	54.00	-25.67	AVG			
								L			

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Remarks:



Ant.	Pol.		Horizontal TX 802.11n(HT40) Mode 2452MHz												
Test	Mode:		TX 8	302.1	l1n(HT4	10) Mode	e 24	152MF	Ιz						
Rem	ark:		No r pres	epor cribe	t for the ed limit.	e emissio	on v	vhich	more t	han 10 dE	3 be	elow the	1		
120.0	dBu∀/m														
110															
100															
90															
80															
70									FCC	Part15 RE-CI	ass	B Above 1	G PK		
,0 c0															
50									FCC	Part15 RE-CI	ass	B Above 1	GAV		
50															
40		~~													
30		ž.													
20							-								
10															
0.0 100	0.000 3500.0	0 60	00.00	850	0.00 11	000.00 (M	IHz)	160	00.00 1	8500.00 21	000.0	00 23500.	00 2600	0.0	
				_											
No	No. Frequency Mo. (MHz)		Re (dl	ading BuV)	Facto (dB/m	or I)	Le (dBu	vel V/m)	(dBuV/m	ז  ו(ו	(dB)	Detect	or		
1	4903.591 3		38	8.59	2.36		40	.95	74.00		-33.05	peak	<		
2	* 490	4903.739 26.30		6.30	2.36		28	.66	54.00		-25.34	AVG	;		

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Remarks:





Ant. Po	Pol.   Vertical     Mode:   TX 802.11n(HT40) Mode 2452MHz											
Test Mo	de:	TX 8	02.11n(HT4	10) Mode 24	152MHz							
Remark	:	No res	eport for the cribed limit.	e emission v	vhich more t	han 10 dB t	pelow the	:				
120.0 dB	ıV/m											
110												
100												
90												
80					FCC	Part15 RF-Clac	e B Abovo 1	G PK				
70					100		500001					
60							<b>D</b> 41 1	<u></u>				
50					FUU	Parts RE-Clas	S B ADOVE I					
40		_										
30												
20												
10												
0.0	2500.00 6	000.00	9500.00 11	000.00 (MH-)	16000.00 1	9500.00 21000	00 33500	00 26000 0				
1000.00	0 3300.00 0	000.00	000.00 11	000.00 (MH2)	18000.00		J.UU 23500	.00 28000.u				
No.	Frequer	ncy	Reading	Factor		Limit	Margin	Detector				
	(11112	)	(авих)	(ab/m)	(dbuv/m)	(abuv/m)	(UD)					
1	1 4904.213 37.53		37.53	2.36	39.89	74.00	-34.11	peak				
2 *	4904.4	07	26.22	2.36	28.58	54.00	-25.42	AVG				
<u> </u>												
Remark	s:											

EN



### 3.3. Band Edge Emissions (Radiated)

Limit

### FCC CFR Title 47 Part 15 Subpart C Section 15.247 (d)/ RSS 247 5.5:

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

### **Test Configuration**



#### **Test Procedure**

- 1. The EUT was setup and tested according to ANSI C63.10:2013 requirements.
- 2. The EUT is placed on a turn table which is 0.1 meter above ground. The turn table is rotated 360 degrees to determine the position of the maximum emission level.
- 3. The EUT was positioned such that the distance from antenna to the EUT was 3 meters.
- 4. The antenna is scanned from 1 meter to 4 meters to find out the maximum emission level. This is repeated for both horizontal and vertical polarization of the antenna. In order to find the maximum emission, all of the interface cables were manipulated according to ANSI C63.10:2013 on radiated measurement.
- The receiver set as follow: 5.

RBW=1MHz, VBW=3MHz Peak detector for Peak value.

RBW=1MHz, VBW see note 1 with Peak Detector for Average Value.

Note 1: For measurements above 1 GHz the resolution bandwidth is set to 1 MHz, then the video bandwidth is set to 3 MHz for peak measurements and 1 MHz resolution bandwidth with 1/T video bandwidth with peak detector for average measurements. For the Duty Cycle please refer to clause 3.8 Duty Cycle.

#### **Test Mode**

Please refer to the clause 2.4.

CTC Laboratories, Inc.



#### Test Results

Ant	t. Pol. Horizontal													
Tes	t Moo	de:	802.	11b	Mode	241	2MHz	2						
120.0	) dBu¥	/m												
110								_						
100								-				_	$\sim$	
90												_		h
80								-			FCC Par	15 C	- Above 1G Pl	
70														
60											FCC Par	15 C/	- Above 1G A	, h
50			and the second								2			
40	Marganer	manages where the second s			man	m	water	n.m.	~~~ <del>~~</del> M	hanna maria	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~			
30			_								_			
20														
10 0.0			_											
23	804.600	2316.60 2	328.60	234	0.60 2	2352.	60 (M	Hz)	237	6.60	2388.60	2400.	60 2412.6	60 2424.60
1	No.	Freque (MHz	ncy :)	Re (d	eading IBuV)		Facto (dB/m	or 1)	Le (dBu	evel iV/m)	Limi (dBuV/	t m)	Margin (dB)	Detector
	1	2390.0	00	2	2.01		30.84	1	52	.85	74.00	)	-21.15	peak
	2 *	2390.0	00	1	0.03	Τ	30.84	1	40	.87	54.00	)	-13.13	AVG

Remarks:

EN



Ant	t. Pol	•	Vert	ical										
Tes	st Mo	de:	802	.11b	Mode 2	2412MF	Ιz							
120.0 ī	) dBu\	//m												1
110														
100														
90													~	
90												$\int$	$\gamma$	
70										FCC Part1	5 C - /	bove 1G F	YK	
~~ ~~												1		
БО										FCC Part1	5 C - /	bove 1G A	v l	
50										2.0				
40	) 		en e	(Manage and	leve-records	when he was	an an an	and property was	derreden allerse	and the work	www			
30	D													
20											-			
10	0													
U.U 23	0.0 2302.200 2314.20 2326.20		2326.20	233	8.20 23	350.20	(MHz)	237	4.20	2386.20 23	398.20	2410.	20 242	2.20
N	lo.	Freque (MH	ency z)	Re (d	ading BuV)	Fac (dB/	tor m)	Le (dBu	vel V/m)	Limit (dBuV/n	א ו)	/largin (dB)	Detecto	or
	1	2390.	000	2	2.68	30.8	34	53	.52	74.00	-	20.48	peak	(
2	2 *	2390.	000	7	7.97	30.8	34	38	.81	54.00	-	15.19	AVG	; T
Rer 1.F	actor	s: (dB/m) = • value =	Anter	na F	actor (	dB/m)+	Cabl	e Fac	tor (dE	8)-Pre-am	plifie	er Fact	or	

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FN



4			Vertical												
est ivioc	le:	802	802.11b Mode 2462 MHz												
20.0 dBuV/	'n		i												
'															
· / /	- h					FCC Part15 C	- Above 1G P	ĸ							
· 茾															
ı   <i> </i>			1												
, <del> </del>			X			FCC Part15 C	- Above 16 A	<u>v</u>							
		Wh	3												
			* Manual Commen	hinder the measure my helper	ahawa nikitika tahun dar taran ta	Valent <sup>eren</sup> edeseteren ander sterregtig	alver the providence	vinder/meach							
'															
·															
.0 2451.200	2463.20	2475.20	2487.20	2499.20 (MHz)	2523.20	2535.20 2547	.20 2559.	20 257							
No.	Freque	ency	Reading	Factor	Level	Limit	Margin	Detecto							
1	(MH)	z) 500	(aBuV)	(aB/m)	(aBuV/m)	(aBUV/m)	(aB)	noak							
0 *	2403.0	+03.500 24.58		04.04	00.03	74.00	-10.57	peak							
2 *	2 * 2483.50		8.60	31.24	39.84	54.00	-14.16	AVG							

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_																			
Ant	. Pol	•		Hori	zont	al													
Tes	t Mo	de:		802.	11g	Mode	24	412N	lHz										
120.0	) dBu\	//m																	
110																			
100																			
100																			
90													-		+	1	-		
80													F	CC Part1	5 C -	Above 1G	PK	-+	
70				_												1		- 1	
60														Ĵ.	Ι,	/			
50												F	2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	5 C/-	Above 16	AV			
40	50												www	S.					
40	mader	Mart	esterne and an and a state	served and	mahan	aly Maria All	n.	1800-100-100-100-100-100-100-100-100-100	an star an		www.www.	and a start of the second							
30															+				
20													_		+				
10															_				
0.0																			
23	02.200	2314	.20 2	326.20	233	8.20	23	0.20	(MH	z,	23/	4.20	2386.	20 2	398.2	20 241	0.20	J 2422	2.20
N	lo.	Fr	equer (MHz	ncy )	Re (d	ading BuV)	9	Fa (dE	ictor 3/m)	r )	Le (dBu	evel uV/m)	(dl	Limit BuV/r	n)	Margi (dB)	in	Detect	or
	1	23	390.0	00	27.57			30.84			58.41		74.00		-15.59		peak		
2	*	23	390.0	00	1	6.40		30.84		47.24		54.00		-6.76		AVG			



An	t. Pol.		Verti	cal										
Tes	st Moo	de:	802.11g Mode 2412MHz											
120.0	) dBu¥	/m												
110														
100														
90														
80											D		·	
70										FLL	Part 15 L	, - Above II	a PK	
60										1	D	]		-
50										- IXCL	Partis	Above II		
40		a d de de tadadte a cu	1.001.000	مہ م ما	Lanara Managaran	and described	استعممهم	handhamathan	el-whereau readers	m 2	water			
30														
20														
10														
0.0	203.400	2315 40 2	27 40	233	9.40 23	51 40	(MH2)	237	5.40	2387.40	2390	40 24	11 40	2423.40
2.		2010.10 2		LUU	0.10 20	01.10	()	LUI	0.10	2001.10	LUUT			2120.10
		_		_		_								
1	No.	Frequer (MHz	ncy )	Re (d	ading BuV)	Fa (dB	ctor /m)	Le (dBu	vel IV/m)	Lii (dBu	nit IV/m)	Margi (dB)	n De	etector
	1	2390.0	00	2	4.71	30.	.84	55	.55	74	.00	-18.4	5 p	eak
	2 *	2390.0	00	8	3.24	30.	.84	39	.08	54	.00	-14.9	2 /	AVG
						-								