

TEST REPORT

		me : Pocket WiFi ber : Pocket WiFi V3.0, Pocket WiFi V3.0 -P, Pocket WiFi V3.0 -E : 2AMEH-POCKETWIFIV3
Prepared for Address	:	SolaX Power Network Technology (Zhejiang) Co. ,Ltd. No.288,Shizhu Road, Tonglu Economic Development Zone, Tonglu City, Zhejiang Province, 310000 P.R. China
Prepared by Address	::	EMTEK (DONGGUAN) CO., LTD. -1&2F., Building 2, Zone A, Zhongda Marine Biotechnology Research and Development Base, No. 9, Xincheng Avenue, Songshanhu High-technology Industrial Development Zone, Dongguan, Guangdong, China
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Report Number Date(s) of Tests		EDG2209290149E01301R September 29, 2022 to December 16, 2022

Date of Issue : December 17, 2022



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 东莞市信遇科技有限公司

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1 TEST RESULT CERTIFICATION

Applicant	:	SolaX Power Network Technology (Zhejiang) Co. ,Ltd.
Address	:	No.288,Shizhu Road, Tonglu Economic Development Zone, Tonglu City, Zhejiang Province, 310000 P.R. China
Manufacturer	:	SolaX Power Network Technology (Zhejiang) Co. ,Ltd.
Address	:	No.288,Shizhu Road, Tonglu Economic Development Zone, Tonglu City, Zhejiang Province, 310000 P.R. China
EUT	:	
Model Name	:	Pocket WiFi V3.0, Pocket WiFi V3.0 -P, Pocket WiFi V3.0 -E
Trademark	:	SolaX Power

Measurement Procedure Used:

APPLICABLE STANDARDS					
STANDARD TEST RESULT					
FCC 47 CFR Part 2, Subpart J FCC 47 CFR Part 15, Subpart C	PASS				

The above equipment was tested by EMTEK (DONGGUAN) CO., LTD. The test data, data evaluation, test procedures, and equipment configurations shown in this report were made in accordance with the procedures given in ANSI C63.10 (2013) and the energy emitted by the sample EUT tested as described in this report is in compliance with the requirements of FCC Rules Part 2 and Part 15.247

The test results of this report relate only to the tested sample identified in this report.

Date of Test :	: September 29, 2022 to December 08, 2022				
Prepared by :		Warren Deng			
		Warren deng /Engineer			
		Tim Dong	DONGGUAN		
Reviewer :		V	5		
	•	Tim Dong /Supervisor	EM7		
Approved & Authorized Signer :		L	* FESTING		
		Sam Lv /Manager			



EUT TECHNICAL DESCRIPTION 2

Characteristics	Description
Product	Pocket WiFi
Model Number	Pocket WiFi V3.0, Pocket WiFi V3.0 -P, Pocket WiFi V3.0 -E Note: Only the antenna gain of the three models is different, and the internal circuit boards are the same. The model Pocket WiFi V3.0 is Built-in antenna, and the antenna gain is 3.63 dBi. The model Pocket WiFi V3.0-P is a Whip antenna with an antenna gain of 3.0 dBi. Model Pocket WiFi V3.0-E is a Suction cup antenna with an antenna gain of 3.5 dBi. Therefore, we tested the radiation stray of the three products, and conducted the conduction method test for the model "Pocket WiFi V3.0"
Sample Number	1#
IEEE 802.11 WLAN Mode Supported	 ⊠802.11b ⊠802.11g ⊠802.11n(20MHz channel bandwidth) ⊠802.11n(40MHz channel bandwidth)
Data Rate	802.11 b:1,2,5.5,11Mbps; 802.11 g:6,9,12,18,24,36,48,54Mbps; 802.11 n: MCS0~7,up to 150Mbps;
Modulation	DSSS with DBPSK/DQPSK/CCK for 802.11b; OFDM with BPSK/ CCK /16QAM/64QAM for 802.11g/n20/n40;
Operating Frequency Range	☐2412-2462MHz for 802.11b/g/n(HT20); ☐2422-2452MHz for 802.11n(HT40);
Number of Channels	 ☑ 11 channels for 802.11b/g n(HT20); ☑ 7 Channels for 802.11n(HT40);
Transmit Power Max	14.78 dBm
Smart system	SISO for802.11 b/g/n(HT20)/ n(HT40); MIMO for802.11n(HT20);
Antenna Type	Pocket WiFi V3.0: Built-in antenna Pocket WiFi V3.0-P: Whip antenna Pocket WiFi V3.0-E: Suction cup antenna
Antenna Gain	Pocket WiFi V3.0: 3.63 dBi Pocket WiFi V3.0-P:3.0 dBi Pocket WiFi V3.0-E:3.5 dBi
Test voltage	DC 5V for inverter
Temperature Range	-40°C ~ +65°C
Date of Received	August 31, 2022

Note: for more details, please refer to the User's manual of the EUT.



FCC Part Clause	Test Parameter	Verdict	Remark		
15.247(a)(2)	DTS (6dB) Bandwidth	PASS			
15.247(b)(3)	Maximum Peak Conducted Output Power	PASS			
15.247(e)	Maximum Power Spectral Density Level	PASS			
15.247(d)	Unwanted Emission Into Non-Restricted	PASS			
	Frequency Bands				
15.247(d)	5.247(d) Unwanted Emission Into Restricted Frequency				
15.209	Bands (conducted)				
15.247(d)	Radiated Spurious Emission	PASS			
15.209					
15.207	Conducted Emission Test	PASS			
15.247(b)	Antenna Application PASS				
	NOTE1:N/A (Not Applicable)				
	NOTE2: According to FCC OET KDB 558074, the report use radiated				
	measurements in the restricted frequency bands. In addition, the radiated				
	test is also performed to ensure the emissions emanating from the device				
	cabinet also comply with the applicable limits.				

3 SUMMARY OF TEST RESULT

RELATED SUBMITTAL(S) / GRANT(S):

This submittal(s) (test report) is intended for FCC ID: 2AMEH-POCKETWIFIV3 filing to comply with Section 15.247 of the FCC Part 15, Subpart C Rules.



TEST METHODOLOGY 4

4.1 GENERAL DESCRIPTION OF APPLIED STANDARDS

According to its specifications, the EUT must comply with the requirements of the following standards: FCC 47 CFR Part 2, Subpart J FCC 47 CFR Part 15, Subpart C FCC KDB 558074 D01 15.247 Meas Guidance v05r02

4.2 MEASUREMENT EQUIPMENT USED

4.2.1 **Conducted Emission Test Equipment**

Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Cal. Interval
Test Receiver	Rohde& Schwarz	ESCI	100137	2022/05/19	1Year
L.I.S.N.	Rohde& Schwarz	ENV216	101209	2022/05/19	1Year
RF Switching Unit	CDS	RSU-M2	38401	2022/05/19	1Year

4.2.2 Radiated Emission Test Equipment

Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Cal. Interval
EMI Test Receiver	Rohde & Schwarz	ESCI	101415	2022/05/19	1Year
Power Amplifier	HP	8447F	OPTH64	2022/05/19	1Year
Bilog Antenna	Schwarzbeck	VULB9163	141	2022/05/22	1Year
Horn antenna	Schwarzbeck	BBHA9120D	1272	2022/05/22	1Year
Power Amplifier	LUNAR EM	LNA1G18-40	J1010000081	2022/05/19	1Year
Loop Antenna	Schwarzbeck	FMZB1513	1513-60	2022/05/22	2 Year
Signal Analyzer	R&S	FSV30	103039	2022/05/19	1Year
Bilog Antenna	Schwarzbeck	VULB9163	141	2022/05/22	1Year
Band reject Filter(50dB)	WI/DE	WRCGV-2400(2400- 2485MHz)	2	2022/05/20	1 Year

4.2.3 Radio Frequency Test Equipment

Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Cal. Interval
Wireless Connectivity Tester	R&S	CMW270	102543	2022/06/21	1Year
Automatic Control Unit	Tonscend	JS0806-2	2118060480	2022/06/21	1Year
Signal Analyzer	KEYSIGHT	N9010B	MY60242456	2022/06/21	1Year
Analog Signal Generator	KEYSIGHT	N5173B	MY61252625	2022/06/21	1Year
UP/DOWN-Converter	R&S	CMW-Z800A	100274	2022/06/21	1Year
Vector Signal Generator	KEYSIGHT	N5182B	MY61252674	2022/06/21	1Year
Frequency Extender	KEYSIGHT	N5182BX07	MY59362541	2022/06/21	1Year
Temperature&Humidity test chamber	ESPEC	EL-02KA	12107166	2022/06/21	1 Year



4.3 DESCRIPTION OF TEST MODES

The EUT has been tested under its typical operating condition.

The EUT configuration for testing is installed on RF field strength measurement to meet the Commissions requirement and operating in a manner which intends to maximize its emission characteristics in a continuous normal application.

The Transmitter was operated in the normal operating mode. The TX frequency was fixed which was for the purpose of the measurements.

Test of channel included the lowest and middle and highest frequency to perform the test, then record on this report.

Those data rates (🛛 802.11b:1 Mbps; 🖾 802.11g: 6 Mbps; 🖾 802.11n(HT20): MCS0; 🖾 802.11n(HT40): MCS0) were used for all test.

Pre-defined engineering program for regulatory testing used to control the EUT for staying in continuous transmitting and receiving mode is programmed.

Channel	Frequency	Channel	Frequency		Frequency
Channel	(MHz)	Channel	(MHz)	Channel	(MHz)
1	2412	6	2437	11	2462
2	2417	7	2442		
3	2422	8	2447		
4	2427	9	2452		
5	2432	10	2457		

Frequency and Channel list for 802.11b/g/n (HT20):

Frequency and Channel list for 802.11n (HT40):

Channel	Frequency	Channel	Frequency	Channel	Frequency
Channel	(MHz)	Channel	(MHz)	Channel	(MHz)
3	2422	6	2437	9	2452
4	2427	7	2442		
5	2432	8	2447		

Test Frequency and Channel for 802.11b/g/n (HT20):

Lowest F	requency	Middle Frequency Highest Frequ		st Frequency	
Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)
1	2412	6	2437	11	2462

Test Frequency and Channel for 802.11n (HT40):

Lowest F	Lowest Frequency		Middle Frequency H		st Frequency
Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)
3	2422	6	2437	9	2452

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4.4 TEST SOFTWARE

Item	Software	
Radiated Emission:	EMC (Ver. EMEC-3A1)	
Conducted Emission	EZ-EMC (Ver. CON-03A1)	



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5 FACILITIES AND ACCREDITATIONS

5.1 FACILITIES

All measurement facilities used to collect the measurement data are located at

EMTEK (DONGGUAN) CO., LTD.

-1&2F., Building 2, Zone A, Zhongda Marine Biotechnology Research and Development Base, No. 9, Xincheng Avenue, Songshanhu High-technology Industrial Development Zone, Dongguan, Guangdong, China

The sites are constructed in conformance with the requirements of ANSI C63.7, ANSI C63.10 and CISPR Publication 32.

5.2 LABORATORY ACCREDITATIONS AND LISTINGS

Site Description	
EMC Lab.	: Accredited by CNAS, 2020.08.27 The certificate is valid until 2024.07.05 The Laboratory has been assessed and proved to be in compliance with CNAS/CL01:2018 The Certificate Registration Number is L3150
	Accredited by FCC Designation Number: CN1300 Test Firm Registration Number: 945551
	Accredited by A2LA, April 05, 2021 The Certificate Registration Number is 4321.02
	Accredited by Industry Canada The Certificate Registration Number is CN0113
Name of Firm Site Location	 EMTEK (Dongguan) Co., Ltd. -1&2/F.,Buiding 2,Zone A,Zhongda Marine Biotechnology Research and Development Base,N.9,Xincheng Avenue,Songshanhu High-technology Industrial Development Zone, Dongguan, Guangdong, China



6 TEST SYSTEM UNCERTAINTY

The following measurement uncertainty levels have been estimated for tests performed on the apparatus:

Parameter	Uncertainty
Radio Frequency	± 1x10^-5
Maximum Peak Output Power Test	± 1.0 dB
Conducted Emissions Test	± 2.0 dB
Radiated Emission Test	± 2.0 dB
Power Density	± 2.0 dB
Occupied Bandwidth Test	± 1.0 dB
Band Edge Test	± 3 dB
All emission, radiated	± 3 dB
Antenna Port Emission	± 3 dB
Temperature	± 0.5 °C
Humidity	± 3 %

Measurement Uncertainty for a level of Confidence of 95%



7 SETUP OF EQUIPMENT UNDER TEST

7.1 RADIO FREQUENCY TEST SETUP 1

The WLAN component's antenna ports(s) of the EUT are connected to the measurement instrument per an appropriate attenuator. The EUT is controlled by PC/software to emit the specified signals for the purpose of measurements.



7.2 RADIO FREQUENCY TEST SETUP 2

The test site semi-anechoic chamber has met the requirement of NSA tolerance 4 dB according to the standards: ANSI C63.10. The test distance is 3m.The setup is according to the requirements in Section 13.1.4.1 of ANSI C63.10-2013 and CAN/CSA-CEI/IEC CISPR 22.

Below 30MHz:

The EUT is placed on a turntable 0.8 meters above the ground in the chamber, 3 meter away from the antenna (loop antenna). The Antenna should be positioned with its plane vertical at the specified distance from the EUT androtated about its vertical axis formaximum response at each azimuth about the EUT. The center of the loopshall be 1 m above the ground.For certain applications, the loop antennaplane may also need to be positioned horizontally at the specified distance from the EUT.

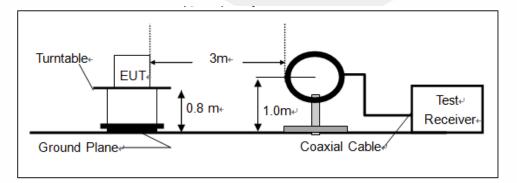
30MHz-1GHz:

The EUT is placed on a turntable 0.8 meters above the ground in the chamber, 3 meter away from the antenna. The maximal emission value is acquired by adjusting the antenna height, polarisation and turntable azimuth. Normally, the height range of antenna is 1 m to 4 m, the azimuth range of turntable is 0° to 360°, and the receive antenna has two polarizations Vertical (V) and Horizontal (H).

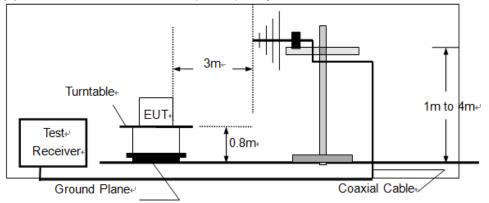
Above 1GHz:

The EUT is placed on a turntable 1.5 meters above the ground in the chamber, 3 meter away from the antenna. The maximal emission value is acquired by adjusting the antenna height, polarisation and turntable azimuth. Normally, the height range of antenna is 1 m to 4 m, the azimuth range of turntable is 0° to 360°, and the receive antenna has two polarizations Vertical (V) and Horizontal (H).

(a) Radiated Emission Test Set-Up, Frequency Below 30MHz

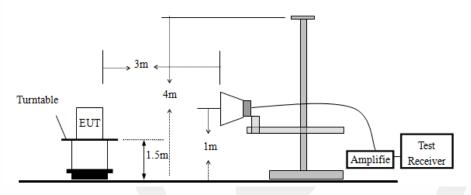






(b)Radiated Emission Test Set-Up, Frequency Below 1000MHz

(c) Radiated Emission Test Set-Up, Frequency above 1000MHz

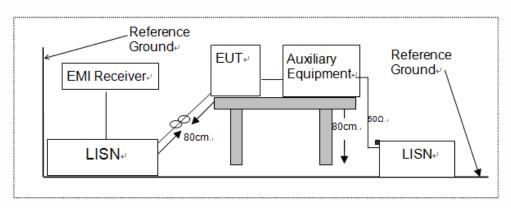


7.3 CONDUCTED EMISSION TEST SETUP

The mains cable of the EUT (maybe per AC/DC Adapter) must be connected to LISN. The LISN shall be placed 0.8 m from the boundary of EUT and bonded to a ground reference plane for LISN mounted on top of the ground reference plane. This distance is between the closest points of the LISN and the EUT. All other units of the EUT and associated equipment shall be at least 0.8m from the LISN.

Ground connections, where required for safety purposes, shall be connected to the reference ground point of the LISN and, where not otherwise provided or specified by the manufacturer, shall be of same length as the mains cable and run parallel to the mains connection at a separation distance of not more than 0.1 m.

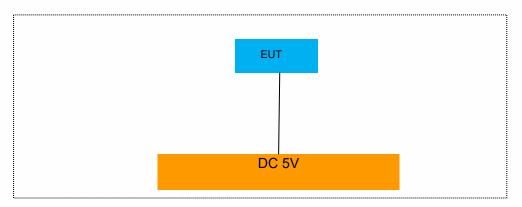
According to the requirements in Section 13.1.4.1 of ANSI C63.10-2013 Conducted emissions from the EUT measured in the frequency range between 0.15 MHz and 30 MHz using CISPR Quasi-Peak and average detector mode.



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7.4 BLOCK DIAGRAM CONFIGURATION OF TEST SYSTEM



7.5 SUPPORT EQUIPMENT

EUT Cable List and Details			
Cable Description	Length (m)	Shielded/Unshielded	With / Without Ferrite
1	1	1	/

Auxiliary Cable List and Details					
Cable Description Length (m) Shielded/Unshielded With / Without Ferri					
1	1	1	1		

Auxiliary Equipment List and Details					
Description	Manufacturer	Model	Serial Number		
Motherboard Power Supply	GINLONG	1	/		
DC Power supply	/	KDP3603	20074D3062946		

Notes:

- 1. All the equipment/cables were placed in the worst-case configuration to maximize the emission during the test.
- 2. Grounding was established in accordance with the manufacturer's requirements and conditions for the intended use.
- 3. Unless otherwise denoted as EUT in *[Remark]* column , device(s) used in tested system is a support equipment



8 **TEST REQUIREMENTS**

8.1 DTS (6DB) BANDWIDTH

8.1.1 Applicable Standard

According to FCC Part15.247 (a)(2) and KDB 558074 D01 15.247 Meas Guidance v05r02

8.1.2 **Conformance Limit**

The minimum -6 dB bandwidth shall be at least 500 kHz.

8.1.3 **Test Configuration**

Test according to clause 7.1 radio frequency test setup 1

8.1.4 **Test Procedure**

The EUT was operating in IEEE 802.11b/g/n mode and controlled its channel. Printed out the test result from the spectrum by hard copy function.

The RF output of EUT was connected to the spectrum analyzer by RF cable and attenuator. The path loss was compensated to the results for each measurement.

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

Set RBW = 100 kHz.

Set the video bandwidth (VBW) =300kHz.

Set Span=2 times OBW

Set Detector = Peak.

Set Trace mode = max hold.

Set Sweep = auto couple.

Allow the trace to stabilize.

Measure the maximum width of the emission that is constrained by the frequencies associated with the two outermost amplitude points (upper and lower frequencies) that are attenuated by 6 dB relative to the maximum level measured in the fundamental emission.

Measure and record the results in the test report.

8.1.5 **Test Results**

Temperature:	23° C
Relative Humidity:	56%
ATM Pressure:	1011 mbar

Operation Mode	Channel Number	Channel Frequency (MHz)	Measurement Bandwidth (MHz)	Limit (kHz)	Verdict
	1	2412	9.527	>500	PASS
802.11b	6	2437	9.086	>500	PASS
	11	2462	9.522	>500	PASS
	1	2412	16.36	>500	PASS
802.11g	6	2437	16.37	>500	PASS
	11	2462	16.36	>500	PASS
000.11-	1	2412	17.60	>500	PASS
802.11n	6	2437	17.59	>500	PASS
(HT20)	11	2462	17.64	>500	PASS
000.11-	3	2422	32.92	>500	PASS
802.11n	6	2437	32.88	>500	PASS
(HT40)	9	2452	33.78	>500	PASS

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est Model		8	IB) Bandwidth 02.11g	
Spectrum Analyzer 1	٦	Channe	l 6: 2437MHz	
Occupied BW				Frequency v
Coupling: DC	Input Z: 50 Ω Atten: 30 dB Corr CCorr μW Path: Stan Freq Ref: Int (S)	idard Gate: Off Av	enter Freq: 2.437000000 GHz vg]Hold:>10/10 adio Std: None	Center Frequency 2.437000000 GHz
1 Graph v	Ref LvI Offset	10.00 dB		Span 30.000 MHz
Scale/Div 10.0 dB	Ref Value 10.0			CF Step
Log 0.00		monto and a south and a south		3.000000 MHz
-20.0	and the second sec	and any it must be a supported and a support of the	All Maria	Auto Man
-30.0				Freq Offset
-50.0				0 Hz
-70.0				
-80.0 Center 2.43700 GHz	#Video BW 300	0.00 kHz*	Span 30 MHz	
#Res BW 100.00 kHz			Sweep 3.73 ms (1001 pts	
2 Metrics				
Occupied Bandwidth		Measure Trace	Trace 1	
16.542 M	ИНz	Total Power	11.9 dBm	
Transmit Freq Error x dB Bandwidth	6.673 kHz 16.37 MHz	% of OBW Power x dB	99.00 % -6.00 dB	
	Dec 15, 2022 4:03:12 AM			
est Model Spectrum Analyzer 1		Channe	802.11g al 11: 2462MHz	
Occupied BW				Frequency 🔻 🔆
Coupling: DC Align: Auto	Input Z: 50 Ω Atten: 30 dB Corr CCorr μW Path: Stan Freq Ref: Int (S)	idard Gate: Off Av	enter Freq: 2.462000000 GHz vg Hold:>10/10 adio Std: None	Center Frequency 2.462000000 GHz
Dar 1 Graph v	Ref LvI Offset	10.00 dB		Span 30.000 MHz
Scale/Div 10.0 dB	Ref Value 10.00) dBm		CF Step
-10.0	Amen Berry Andrew Comparison and many	mmmmmmmm	A (A.	3.000000 MHz
				Auto
-20.0				Auto Man
			and and a second a	Man Freq Offset
-30.0 -40.0 -50.0 -60.0				Man Man
-30.0 -40.0 -50.0				Man Freq Offset
-30.0 -40.0 -50.0 -60.0 -70.0	#Video BW 300	.00 kHz*	Span 30 MHz	Man Freq Offset 0 Hz
-30.0 -40.0 -50.0 -60.0 -70.0 -80.0 Center 2.46200 GHz	#Video BW 300	.00 kHz*		Man Freq Offset 0 Hz
-30.0 -30.0 -30.0 -50.0 -70.0 -70.0 -80.0 Center 2.46200 GHz #Res BW 100.00 kHz 2 Metrics	#Video BW 300	.00 kHz* Measure Trace	Span 30 MHz	Man Freq Offset 0 Hz
-30.0 -40.0 -50.0 -70.0 -70.0 -80.0 Center 2.46200 GHz #Res BW 100.00 kHz			Span 30 MHz Sweep 3.73 ms (1001 pts	Man Freq Offset 0 Hz
-30.0 -30.0 -30.0 -50.0 -50.0 -70.0 -70.0 -80.0 -7		Measure Trace	Span 30 MHz Sweep 3.73 ms (1001 pts	Man Freq Offset 0 Hz
-30.0 -30.0 -30.0 -50.0 -50.0 -70.0 -70.0 -80.0 Center 2.46200 GHz #Res BW 100.00 kHz 2 Metrics Coccupied Bandwidth 16.573 M Transmit Freq Error	/Hz 61.840 kHz	Measure Trace Total Power % of OBW Power	Span 30 MHz Sweep 3.73 ms (1001 pts Trace 1 12.9 dBm 99.00 %	Man Freq Offset 0 Hz



est Model		802.	dB) Bandwidth .11n (HT20) el 1: 2412MHz	
Spectrum Analyzer 1 Occupied BW KEYSIGHT Input: RF Coupling: DC Align: Auto	Input Z: 50 Ω Atten: 30 d	standard Gate: Off	Center Freq: 2.412000000 GHz Avg∣Hold.>10/10 Radio Std: None	Center Frequency Center Frequency Settings
1 Graph v Scale/Div 10.0 dB Log 0.00 -10.0 -200 -30.0 -30.0 -30.0 -50.	Ref Lvi Offs Ref Value 11	0.00 dBm		Span 30.000 MHz CF Step 3.000000 MHz Auto Man Freq Offset 0 Hz
Center 2.41200 GHz #Res BW 100.00 kHz 2 Metrics • Occupied Bandwidth 17.752 Transmit Freq Error x dB Bandwidth	#Video BW MHz -14.406 kHz 17.60 MHz Dec 15, 2022 4:06:13 AM	Measure Trace Total Power % of OBW Power x dB	-6.00 dB	ts)
est Model Spectrum Analyzer 1 Cocupied BW KEYSIGHT Input: RF	Input Z: 50 Ω Atten: 30 d	802 Chanr B Trig: Free Run	6dB) Bandwidth 2.11n (HT20) nel 6: 2437MHz	Frequency Center Frequency
Coupling: DC Align: Auto VI 1 Graph Scale/Div 10.0 dB Log 0.00 -20.0 -30.0 -30.0 -40.0 -50.0 -70.0	Corr CCorr Freq Ref: Int (S) Ref LvI Offs Ref Value 10	#IF Gain: Low	Avg Hold:>10/10 Radio Std: None	Center Frequency Settings 2.437000000 GHz Span 30.000 MHz CF Step 3.000000 MHz Auto Man Freq Offset 0 Hz
-80.0 Center 2.43700 GHz #Res BW 100.00 kHz 2 Metrics	#Video BW	300.00 kHz* Measure Trace	Span 30 M Sweep 3.73 ms (1001 p Trace 1	



st Model	DTS (6dB) Bandwidth 802.11n (HT20) Channel 11: 2462MHz					
Spectrum Analyzer 1	+			Frequency v 🔆		
KEYSIGHT Input: RF Coupling: DC Align: Auto	Input Z: 50 Ω Atten: 30 dB Corr CCorr μW Path: Sta Freq Ref: Int (S)	Trig: Free Run Gate: Off #IF Gain: Low	Center Freq: 2.462000000 GHz Avg Hold:>10/10 Radio Std: None	Center Frequency 2.462000000 GHz Span		
1 Graph v	Ref LvI Offset			30.000 MHz		
Scale/Div 10.0 dB Log 000 -10.0	Ref Value 10.0	0 dBm	Anarthan	CF Step 3.00000 MHz Auto Man Freq Offset 0 Hz		
-70.0 -80.0 Center 2.46200 GHz #Res BW 100.00 kHz	#Video BW 30	0.00 kHz*	Span 30 Span 30 Span 30 Sweep 3.73 ms (1001			
2 Metrics						
Occupied Bandwidth		Measure Trace	Trace 1			
17.73	3 MHz	Total Power	11.8 dBm			
Transmit Freq Error x dB Bandwidth	33.009 kHz 17.64 MHz	% of OBW Powe x dB	er 99.00 % -6.00 dB			
	Dec 15, 2022 4:06:54 AM					
	Dec 15, 2022 4:06:54 AM	802	6dB) Bandwidth 2.11n (HT40)			
st Model	4:06:54 AM	802	6dB) Bandwidth			
Spectrum Analyzer 1 Occupied BW KEYSIGHT Input: RF Coupling: DC Align: Auto	4:06:54 AM	802	6dB) Bandwidth 2.11n (HT40)	Frequency V Center Frequency Settings		
Spectrum Analyzer 1 Coccupied BW KEYSIGHT Input: RF Coupling: Coupling: CA Align: Auto D Scale/Div 10.0 dB	+ 4:06:54 AM	802 Chann ndard Gate: Off #IF Gain: Low	6dB) Bandwidth 2.11n (HT40) el 11: 2422MHz Center Freq: 2.42200000 GHz AvglHold::10/10	Frequency V Center Frequency 2.42200000 GHz Span 60.000 MHz CF Step		
Spectrum Analyzer 1 Occupied BW KEYSIGHT Input: RF Coupling: DC Aign: Auto CO 1 Graph Scale/Div 10.0 dB 000 -0.00	+ 4:06:54 AM Input Z: 50 Ω Corr CCorr Freq Ref: Int (S) Ref Lvl Offset	802 Chann ndard Gate: Off #IF Gain: Low	6dB) Bandwidth 2.11n (HT40) el 11: 2422MHz Center Freg: 2.42200000 GHz Avg Hold.>10/10 Radio Std: None	Frequency V Center Frequency Settings 2.42200000 GHz Span 60.000 MHz		
Spectrum Analyzer 1 Coccupied BW KEYSIGHT Input: RF Coupling: DC Align: Auto UT Scale/Div 10.0 dB Log 0.00 -10.0 -30.0	+ 4:06:54 AM Input Z: 50 Ω Corr CCorr Freq Ref: Int (S) Ref LvI Offset Ref Value 10.0	802 Chann ndard Trig: Free Run Gate: Off #IF Gain: Low 10.00 dB 00 dBm	6dB) Bandwidth 2.11n (HT40) el 11: 2422MHz Center Freg: 2.42200000 GHz Avg Hold.>10/10 Radio Std: None	Frequency Settings Center Frequency 2.42200000 GHz Span 60.000 MHz CF Step 6.00000 MHz CF Step 6.00000 MHz Auto Man		
Spectrum Analyzer 1 Coccupied BW KEYSIGHT Input RF Coupling: DC Align: Auto CV Scale/Div 10.0 dB Cog 0.00 -10.0 -20.0 -30.0 -30.0 -50.0 -70.0	+ 4:06:54 AM Input Z: 50 Ω Corr CCorr Freq Ref: Int (S) Ref LvI Offset Ref Value 10.0	802 Chann ndard Trig: Free Run Gate: Off #IF Gain: Low 10.00 dB 00 dBm	6dB) Bandwidth 2.11n (HT40) el 11: 2422MHz Center Freg: 2.42200000 GHz Avg Hold.>10/10 Radio Std: None	Frequency Settings Center Frequency 2.42200000 GHz Span 60.000 MHz CF Step 6.00000 MHz Genome Auto		
Spectrum Analyzer 1 Occupied BW KEYSIGHT Input: RF Coupling DC Align: Auto Scale/Div 10.0 dB	+ 4:06:54 AM Input Z: 50 Ω Corr CCorr Freq Ref: Int (S) Ref LvI Offset Ref Value 10.0	802 Chann Indard Trig: Free Run Gate: Off #IF Gain: Low	6dB) Bandwidth 2.11n (HT40) el 11: 2422MHz Center Freq: 2.422000000 GHz Avg Hold::10/10 Radio Std: None	Frequency Settings 2.42200000 GHz Settings Span 60.000 MHz CF Step 6.000000 MHz Auto Man Freq Offset 0 Hz MHz Hz		
Spectrum Analyzer 1 Coccupied BW KEYSIGHT Input: RF Coupling: DC Align: Auto UT Scale/Div 10.0 dB O 0.00 -0.0	+ 4:06:54 AM Input Z: 50 Ω Corr CCorr Freq Ref: Int (S) Ref LvI Offset Ref Value 10.0 μωτωτωτοιομορία ματατίστου μωτατίου τοι ματατίστου μωτατίου τοι ματατίστου μωτατίστου ματιστιστιστη ματατίστου ματιστιστιστιστιστιστιστι	802 Chann Indard Trig: Free Run Gate: Off #IF Gain: Low	6dB) Bandwidth 2.11n (HT40) el 11: 2422MHz Center Freq: 2.42200000 GHz Avg Hold:>10/10 Radio Std: None	Frequency Settings 2.42200000 GHz Settings Span 60.000 MHz CF Step 6.000000 MHz Auto Man Freq Offset 0 Hz MHz Hz		
Spectrum Analyzer 1 Coccupied BW KEYSIGHT Input: RF Coupling: DC Aign: Auto V Scale/Div 10.0 dB Complexity Scale/Div 10.0 dB Complexity CV CV CV CV CV CV CV CV CV CV	+ 4:06:54 AM Input Z: 50 Ω Corr CCorr Freq Ref: Int (S) Ref LvI Offset Ref Value 10.0 μωτωτωτοιομορία ματατίστου μωτατίου τοι ματατίστου μωτατίου τοι ματατίστου μωτατίστου ματιστιστιστη ματατίστου ματιστιστιστιστιστιστιστι	802 Chann Indard Trig: Free Run Gate: Off #IF Gain: Low	6dB) Bandwidth 2.11n (HT40) el 11: 2422MHz Center Freq: 2.422000000 GHz Avg Hold::10/10 Radio Std: None	Frequency Settings 2.42200000 GHz Settings Span 60.000 MHz CF Step 6.000000 MHz Auto Man Freq Offset 0 Hz MHz Hz		
Spectrum Analyzer 1 Coccupied BW KEYSIGHT Input RF Coupling: DC Align: Auto Company Co	+ 4:06:54 AM Input Z: 50 Ω Corr CCorr Freq Ref: Int (S) Ref LvI Offset Ref Value 10.0 μωτωτωτοιομορία ματατίστου μωτατίου τοι ματατίστου μωτατίου τοι ματατίστου μωτατίστου ματιστιστιστη ματατίστου ματιστιστιστιστιστιστιστι	802 Chann Indard Gate. Off #IF Gain: Low 10.00 dB 0 dBm	6dB) Bandwidth 2.11n (HT40) el 11: 2422MHz Center Freg. 2.42200000 GHz Avg Hold > 10/10 Radio Std: None Span 60 I Sweep 7.47 ms (1001 Trace 1 9.83 dBm	Frequency Settings 2.42200000 GHz Settings Span 60.000 MHz CF Step 6.000000 MHz Auto Man Freq Offset 0 Hz MHz Hz		



est Model		80	(6dB) Bandwidth 2.11n (HT40)	
		Chan	nel 11: 2437MHz	
	+			Frequency 🔻 🔆
KEYSIGHT Input: RF Coupling: DC Align: Auto	Input Z: 50 Ω Atten: 30 d Corr CCorr μW Path: 5 Freq Ref: Int (S)	B Trig: Free Run Standard Gate: Off #IF Gain: Low	Center Freq: 2.437000000 GHz Avg Hold:>10/10 Radio Std: None	Center Frequency 2.437000000 GHz Span
1 Graph ▼ Scale/Div 10.0 dB	Ref LvI Offs Ref Value 1			60.000 MHz
Log 0.00 -10.0				CF Step 6.000000 MHz
-20.0	and and an and an and an and an and and	un un set and and an and and and and		Auto Man
-40.0 -50.0				Freq Offset down
-60.0 -70.0 -80.0				
Center 2.43700 GHz #Res BW 100.00 kHz	#Video BW	300.00 kHz*	Span 60 Sweep 7.47 ms (1001	
2 Metrics			-	
Occupied Bandwidth	12 MHz	Measure Trace	e Trace 1	
Transmit Freq Error	117.42 kHz	% of OBW Po	wer 99.00 %	
x dB Bandwidth	32.88 MHz	x dB	-6.00 dB	
	Dec 15, 2022			
	4:08:10 AM			
	4:08:10 AM	DTS		
	•] 4:08:10 AM	80	(6dB) Bandwidth 2.11n (HT40)	
est Model	4:00:10 AW	80	(6dB) Bandwidth	
est Model Spectrum Analyzer 1 Coccupied BW KEVSIGHT Input RF		80 Chan B Trig: Free Run	(6dB) Bandwidth 2.11n (HT40) nel 11: 2452MHz	Frequency V 🔆
est Model Spectrum Analyzer 1 Occupied BW KEYSIGHT Input: RF Coupling: DC Align: Auto		80 Chan	(6dB) Bandwidth)2.11n (HT40) nel 11: 2452MHz	Frequency V Center Frequency 2.45200000 GHz
est Model Spectrum Analyzer 1 Occupied BW KEYSIGHT Input: RF Coupling: DC Align: Auto	4:06:10 AW 4:06:10 AW 10 AW	80 Chan Badard Gate: Off #F Gain: Low et 10.00 dB	(6dB) Bandwidth)2.11n (HT40) nel 11: 2452MHz Center Freq: 2.45200000 GHz AvglHod:>10/10	Frequency Settings Center Frequency 2.45200000 GHz Span 60.000 MHz
est Model Spectrum Analyzer 1 Occupied BW KEYSIGHT Input: RF Coupling: DC Align: Auto LV I Graph Scale/Div 10.0 dB Log 0.00	+ 206:10 AW Input Z: 50 Ω Corr CCorr Freq Ref. Int (S) Ref Lvi Offs Ref Value 10	B Trig: Free Run Standard Gate: Off #IF Gain: Low et 10.00 dB 0.00 dBm	(6dB) Bandwidth 2.11n (HT40) nel 11: 2452MHz Center Freg: 2.45200000 GHz Avg Hold:>10/10 Radio Std: None	Frequency V Center Frequency 2.45200000 GHz Span 60.000 MHz CF Step 6.000000 MHz
est Model Spectrum Analyzer 1 Occupied BW KEYSIGHT Input: RF Coupling: DC Align: Auto UV 1 Graph Scale/Div 10.0 dB	+ Input Z: 50 Ω Corr CCorr Freq Ref: Int (S) Ref Lvl Offs	B Trig: Free Run Standard Gate: Off #IF Gain: Low et 10.00 dB 0.00 dBm	(6dB) Bandwidth 2.11n (HT40) nel 11: 2452MHz Center Freq: 2.45200000 GHz Avg Hold:>10/10 Radio Std: None	Frequency Settings Center Frequency 2.45200000 GHz Span 60.000 MHz CF Step 6.000000 MHz Auto Man
est Model Spectrum Analyzer 1 Cocupied BW KEYSIGHT Input: RF Coupling: DC Align: Auto UV Graph Scale/Div 10.0 dB Og 0.00 -30.00 -30.00 -30.00 -50.0 CV	+ 206:10 AW Input Z: 50 Ω Corr CCorr Freq Ref. Int (S) Ref Lvi Offs Ref Value 10	B Trig: Free Run Standard Gate: Off #IF Gain: Low et 10.00 dB 0.00 dBm	(6dB) Bandwidth 2.11n (HT40) nel 11: 2452MHz Center Freg: 2.45200000 GHz Avg Hold:>10/10 Radio Std: None	Frequency Settings Center Frequency 2.45200000 GHz Span 60.000 MHz CF Step 6.000000 MHz Auto Auto
est Model Spectrum Analyzer 1 Occupied BW KEYSIGHT Input: RF Couping DC Align: Auto LW I Graph Scale/Div 10.0 dB Log 0.00 -10.0 -20.0 -30.0 -40.0 -	+ 206:10 AW Input Z: 50 Ω Corr CCorr Freq Ref. Int (S) Ref Lvi Offs Ref Value 10	B Trig: Free Run Standard Gate: Off #IF Gain: Low et 10.00 dB 0.00 dBm	(6dB) Bandwidth 2.11n (HT40) nel 11: 2452MHz Center Freg: 2.45200000 GHz Avg Hold:>10/10 Radio Std: None	Frequency Settings Center Frequency 2.45200000 GHz Span 60.000 MHz CF Step 6.000000 MHz Good of the set Auto Man Freq Offset
est Model Spectrum Analyzer 1 Cocupied BW KEYSIGHT Input: RF Coupling DC Align: Auto CV 1 Graph Scale/Div 10.0 dB Cog 0.00 -00.0 -00	+ 206:10 AW Input Z: 50 Ω Corr CCorr Freq Ref. Int (S) Ref Lvi Offs Ref Value 10	B Bandard Gate Off #IF Gain: Low et 10.00 dB 0.00 dBm	(6dB) Bandwidth 2.11n (HT40) nel 11: 2452MHz Center Freg: 2.45200000 GHz Avg Hold:>10/10 Radio Std: None	Frequency Center Frequency 2.45200000 GHz Settings Span 60.000 MHz CF Step 6.000000 MHz Auto Man Freq Offset 0 Hz
est Model Spectrum Analyzer 1 Coupled BW KEYSIGHT Input: RF Coupling: DC Align: Auto T Graph Scale/Div 10.0 dB Og 0.00 -10.0 -20.0 -3	+ 200: 10 AM Input Z: 50 Q Corr CCorr Freq Ref. Int (S) Ref Lvi Offs Ref Value 11 Atten: 30 d uW Path: 5 Ref Value 11 Atten: 40 offs Ref Value 11	B Bandard Gate Off #IF Gain: Low et 10.00 dB 0.00 dBm	(6dB) Bandwidth 22.11n (HT40) nel 11: 2452MHz Center Freq: 2.452000000 GHz Avg Hold > 10/10 Radio Std None	Frequency Center Frequency 2.45200000 GHz Settings Span 60.000 MHz CF Step 6.000000 MHz Auto Man Freq Offset 0 Hz
Spectrum Analyzer 1 Occupied BW KEYSIGHT Input: RF Coupling: DC Align: Auto CV 1 Graph Scale/Div 10.0 dB Conter 2.45200 GHz #Res BW 100.00 kHz 2 Metrics	+ 3.06:10 AM Input Z: 50 Ω Corr Corr Freq Ref: Int (S) Ref Lvi Offs Ref Value 10 Junior and an an and an an and an	B Bandard Gate Off #IF Gain: Low et 10.00 dB 0.00 dBm	(6dB) Bandwidth 22.11n (HT40) nel 11: 2452MHz Center Freq: 2.45200000 GHz Avg Hold:>10/10 Radio Std: None	Frequency Center Frequency 2.45200000 GHz Settings Span 60.000 MHz CF Step 6.000000 MHz Auto Man Freq Offset 0 Hz
Spectrum Analyzer 1 Occupied BW KEYSIGHT Input: RF Coupling: DC Align: Auto CV 1 Graph Scale/Div 10.0 dB Conter 2.45200 GHz #Res BW 100.00 kHz 2 Metrics	+ 200: 10 AM Input Z: 50 Q Corr CCorr Freq Ref. Int (S) Ref Lvi Offs Ref Value 11 Atten: 30 d uW Path: 5 Ref Value 11 Atten: 40 offs Ref Value 11	B Trig: Free Run Standard Gate: Off #/F Gain: Low et 10.00 dB 0.00 dBm yperster/us/we/sectors/starse	(6dB) Bandwidth 2.11n (HT40) nel 11: 2452MHz Center Freq: 2.45200000 GHz AvgHotd:>10/10 Radio Std: None Span 60 Sweep 7.47 ms (1007 Trace 1 10.6 dBm	Frequency Center Frequency 2.45200000 GHz Settings Span 60.000 MHz CF Step 6.000000 MHz Auto Man Freq Offset 0 Hz



8.2 MAXIMUM CONDUCTED (AVERAGE) OUTPUT POWER

8.2.1 Applicable Standard

According to FCC Part15.247 (b)(3) and KDB 558074 D01 15.247 Meas Guidance v05r02

8.2.2 **Conformance Limit**

The maximum peak conducted output power of the intentional radiator for systems using digital modulation in the 2400 - 2483.5 MHz bands shall not exceed: 1 Watt (30dBm).

Test Configuration 8.2.3

Test according to clause 7.1 radio frequency test setup 1

8.2.4 **Test Procedure**

a) Set span to at least 1.5 times the OBW.

b) Set RBW = 1-5% of the OBW, not to exceed 1 MHz.

c) Set VBW \geq 3 x RBW.

d) Number of points in sweep $\geq 2 \times \text{span} / \text{RBW}$. (This gives bin-to-bin spacing $\leq \text{RBW}/2$, so that narrowband signals are not lost between frequency bins.)

e) Sweep time = auto.

f) Detector = RMS (i.e., power averaging), if available. Otherwise, use sample detector mode.

g) If transmit duty cycle < 98 %, use a sweep trigger with the level set to enable triggering only on full power pulses. The transmitter shall operate at maximum power control level for the entire duration of every sweep. If the EUT transmits continuously (i.e., with no off intervals) or at duty cycle \geq 98 %, and if each transmission is entirely at the maximum power control level, then the trigger shall be set to "free run".

h) Trace average at least 100 traces in power averaging (i.e., RMS) mode.

i) Compute power by integrating the spectrum across the OBW of the signal using the instrument's band power measurement function, with band limits set equal to the OBW band edges. If the instrument does not have a band power function, sum the spectrum levels (in power units) at intervals equal to the RBW extending across the entire OBW of the spectrum.

8.2.5	Test Results
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Temperature:	23° C
Relative Humidity:	56%
ATM Pressure:	1011 mbar

Operation Mode	Channel Number	Channel Frequency (MHz)	Measurement Level (dBm)	Limit (dBm)	Verdict
	1	2412	14.78	30	PASS
802.11b	6	2437	14.37	30	PASS
	11	2462	14.48	30	PASS
	1	2412	13.42	30	PASS
802.11g	6	2437	13.08	30	PASS
	11	2462	13.18	30	PASS
802.11n	1	2412	12.20	30	PASS
(HT20)	6	2437	12.05	30	PASS
(11120)	11	2462	12.03	30	PASS
802.11n	3	2422	10.33	30	PASS
(HT40)	6	2437	10.10	30	PASS
(1140)	9	2452	10.12	30	PASS



Test Model	Duty cycle 802.11b Channel 1: 2412MHz					
Spectrum Analyzer 1 Swept SA KEYSIGHT Input: RF	+ Frequency τ					
Coupling: DC Align: Auto	Corr CCorr Freq Ref: Int (S) Freq Ref: Int (S)					
Spectrum v Scale/Div 10 dB	Ref Lvi Offset 10.00 dB Ref Level 10.00 dB Carter and the second					
0.00	Full Span					
20.0	Start Freq 2.41200000 GHz Stop Freq					
30.0	2.412000000 GHz					
50.0	CF Step 1.00000 MHz					
60.0						
80.0	Freq Offset 0 Hz					
enter 2.412000000 GHz tes BW 1.0 MHz	#Video BW 3.0 MHz Span 0 Hz Sweep 1.00 ms (1001 pts)					
	Dec 15, 2022					

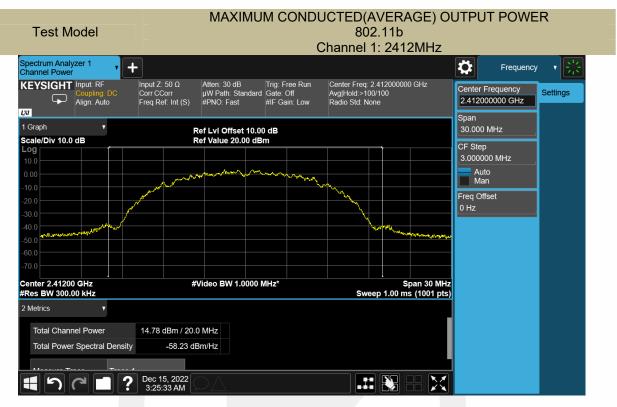
est Model	el Duty cycle 802.11g Channel 1: 2412MHz							
Spectrum Analyzer 1 Swept SA	+	Chann		2	Frequency 🔹 🔆			
KEYSIGHT Input: RF Coupling: DC Align: Auto	Input Z: 50 Ω #Atten: 30 dB Corr CCorr μW Path: Standar Freq Ref: Int (S)	rd Gate: Off	Avg Hold:>100/100 N Trig: Free Run	23456 WWWWW NNNNN	Center Frequency 2.412000000 GHz			
1 Spectrum V Scale/Div 10 dB Log	Ref LvI Offset 10. Ref Level 10.00 di				Span 0.00000000 Hz Swept Span Zero Span			
0.00	·		·····	T-T [T-	Full Span			
-10.0					Start Freq 2.412000000 GHz			
-30.0					Stop Freq 2.412000000 GHz			
40.0					AUTO TUNE			
-50.0					CF Step 1.000000 MHz			
-70.0					Auto Man			
-80.0					Freq Offset 0 Hz			
Center 2.412000000 GHz Res BW 1.0 MHz	#Video BW 3.0 I	MHz	Sweep 1.00 ms	Span 0 Hz (1001 pts)	X Axis Scale Log Lin			
	2 Dec 15, 2022 4:37:40 AM				Signal Track (Span Zoom)			



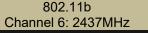
Align: Auto Freq Ref: Int (S) IF Gain: Low Trig: Free Run		Duty cycle 02.11n(HT20 nnel 1: 2412	Cł				lodel	est M	Te
Ref Level 10.00 dB Scale/Div 10 dB Ref Level 10.00 dBm Log Image: Comparison of the second s	3 4 5 6 Center Frequency 2.41200000 GHz Settings IN NNN Span	Hold:>100/100 M Free Run	Off in: Low	th: Standard G	orr µW l	Input 2 C Corr C	Input: RF Coupling: DC	SA SIGHT	Swept KEYS
-70.0 -80.0 Center 2.412000000 GHz #Video BW 3.0 MHz S	pan 0 Hz 0.0000000 Hz Swept Span Zero Span Full Span Start Freq 2.41200000 GHz AUTO TUNE CF Step 1.00000 MHz Auto Man Freq Offset 0 Hz X Axis Scale Log			el 10.00 dBm	Ref Le			/Div 10 dl	Scale/, log = -10.0 = -20.0 = -30.0 = -30.0 = -50.0 = -60.0 = -70.0 = -80.0 =

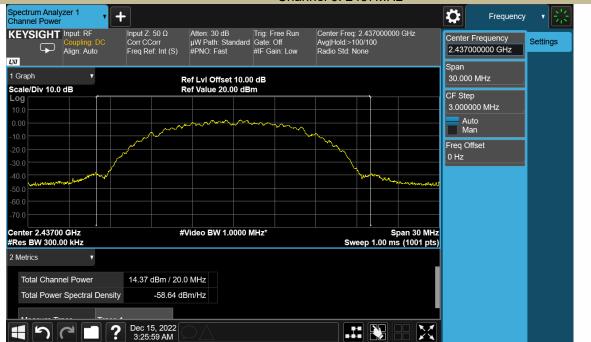
Test Model	Duty cycle 802.11n(HT40) Channel 1: 2422MHz					
Spectrum Analyzer 1	+				Frequency	/ 1 😤
KEYSIGHT Input: RF Coupling: DC Align: Auto	Input Z: 50 Ω #Atten: 30 d Corr CCorr μW Path: St Freq Ref: Int (S)	B PNO: Fast andard Gate: Off IF Gain: Low Sig Track: Off	Avg Type: Log-Power Avg Hold:>100/100 Trig: Free Run	123456 MWWWW PNNNNN	Center Frequency 2.422000000 GHz Span	Settings
1 Spectrum v Scale/Div 10 dB	Ref LvI Offse Ref Level 10.				0.000000000 Hz Swept Span Zero Span	
		an an Anton an Al a Marka an		****	Full Span	
-10.0					Start Freq 2.422000000 GHz	
-30.0					Stop Freq 2.422000000 GHz	
-40.0					AUTO TUNE CF Step	
-60.0					1.000000 MHz Auto Man	
-70.0					Freq Offset 0 Hz	
Center 2.422000000 GHz Res BW 1.0 MHz	#Video BW	3.0 MHz	Sweep 1.00 r	Span 0 Hz ns (1001 pts)	X Axis Scale Log Lin	
	Dec 15, 2022 4:38:44 AM				Signal Track (Span Zoom)	





MAXIMUM CONDUCTED(AVERAGE) OUTPUT POWER

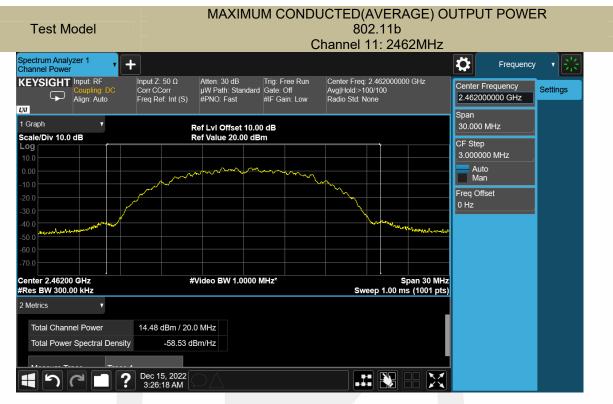




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MAXIMUM CONDUCTED(AVERAGE) OUTPUT POWER 802.11q

Channel 1: 2412MHz



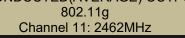
EMTEK (Dongguan) Co., Ltd.

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Test Model	MAXIMUM CONDUCTED(AVERAGE) OUTPUT POWER 802.11g					
	Channel 6: 2437MHz					
Spectrum Analyzer 1 Channel Power	-				Frequ	ency v
KEYSIGHT Input: RF Coupling: DC Align: Auto	Input Z: 50 Ω Atten: 30 dB Corr CCorr μW Path: Standard Freq Ref. Int (S) #PNO: Fast	Trig: Free Run d Gate: Off #IF Gain: Low	Center Freq: 2.4370000 Avg Hold:>100/100 Radio Std: None	00 GHz	Center Frequency 2.437000000 GH: Span	
1 Graph v Scale/Div 10.0 dB	Ref LvI Offset 10.0 Ref Value 20.00 dB				30.000 MHz	
10.0					CF Step 3.000000 MHz	
-10.0	and the second sec	and and the second s			Auto Man	
-20.0				-	Freq Offset 0 Hz	
-30.0				Now Down and the West		
-50.0						
-70.0						
Center 2.43700 GHz #Res BW 300.00 kHz	#Video BW 1.0000	MHz*	Sweep 1.00 n	Span 30 MHz ns (1001 pts)		
2 Metrics						
Total Channel Power	13.08 dBm / 20.0 MHz					
Total Power Spectral Density	-59.93 dBm/Hz					
	Dec 15, 2022					
	3:29:44 AM					

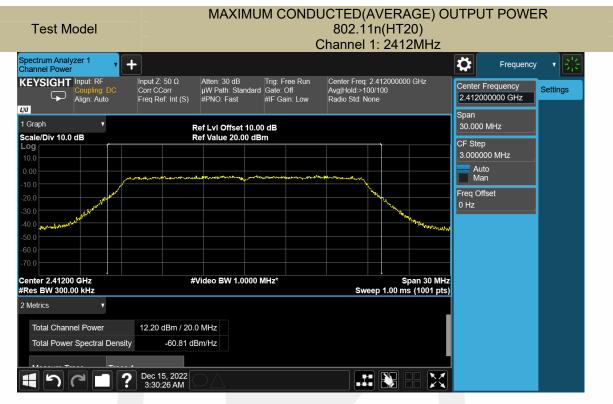
MAXIMUM CONDUCTED(AVERAGE) OUTPUT POWER





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MAXIMUM CONDUCTED(AVERAGE) OUTPUT POWER 802.11n(HT20)



EMTEK (Dongguan) Co., Ltd.

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	MAXIMU	JM COND	JCTED(AVERAC	GE) OUTPUT PO	DWER	
Test Model	802.11n(HT20)					
	Channel 11: 2462MHz					
Spectrum Analyzer 1 Channel Power]			Fre	quency v	
Coupling: DC	Input Z: 50 Ω Atten: 30 dB Corr CCorr μW Path: Standar Freq Ref: Int (S) #PNO: Fast	Trig: Free Run d Gate: Off #IF Gain: Low	Center Freq: 2.462000000 G Avg Hold:>100/100 Radio Std: None	Center Frequen 2.462000000 G Span		
1 Graph ▼ Scale/Div 10.0 dB	Ref LvI Offset 10. Ref Value 20.00 d			30.000 MHz		
Log				CF Step 3.000000 MHz		
10.0				Auto		
-10.0	and a second and a second and a second	her and a second and	mannen	Man Man		
-20.0				Freq Offset 0 Hz		
-30.0				0112		
-40.0				and and growth and from the		
-60.0						
-70.0						
Center 2.46200 GHz #Res BW 300.00 kHz	#Video BW 1.0000	MHz*	Spa Sweep 1.00 ms (n 30 MHz 1001 pts)		
2 Metrics			encep nooning (
Total Channel Power	12.03 dBm / 20.0 MHz					
Total Power Spectral Density	-60.98 dBm/Hz					
() () () () () () () () () () () () () (Dec 15, 2022 3:31:14 AM					
	MAXIMU	JM COND	JCTED(AVERAC	GE) OUTPUT PO	OWER	
Test Model			802.11n(HT40			
		C	hannel 11: 2422	MHz		

Spectrum Analyzer 1 Channel Power	+		t	Frequency	 ▼ ¹/₂
KEYSIGHT Coupling: DC Align: Auto	Corr CCorr µW Path: Standard	Trig: Free Run Center Freq: 2.42 Gate: Off Avg Hold:>100/11 #IF Gain: Low Radio Std: None	⁰⁰ 2	.422000000 GHz	Settings
1 Graph ▼ Scale/Div 10.0 dB	Ref LvI Offset 10.00 Ref Value 20.00 dBr		6	oan 0.000 MHz F Step	
Log 10.0 0.00				.000000 MHz Auto Man	
-10.0 -20.0 -30.0				eq Offset Hz	
-40.0 -50.0 -60.0			and a second sec		
-70.0 Center 2.42200 GHz #Res BW 1.0000 MHz	#Video BW 3.0000 N		Span 60 MHz 1.00 ms (1001 pts)		
2 Metrics					
Total Channel Power Total Power Spectral Den	10.33 dBm / 40.0 MHz -65.69 dBm/Hz				
	Pec 15, 2022 3:34:22 AM				



Test Model	MAXIMUM CONDUCTED(AVERAGE) OUTPUT POWER 802.11n(HT40) Channel 11: 2437MHz				
Spectrum Analyzer 1 Channel Power	• Frequency •				
KEYSIGHT Input: RF Coupling DC Aign: Auto 1 Graph Scale/Div 10.0 dB Log 10.0 0.00 -0.00	Input Z: 50 Ω Corr CCorr Freq Ref. Int (S) Atten: 30 dB JW Path: Standard #PNO. Fast Trig: Free Run Gate: Off #F Gain: Low Center Freq: 2.437000000 GHz Avg Hold>100/100 Radio Std: None Center Frequency 2.437000000 GHz Settings Ref Lvi Offset 10.00 dB Ref Value 20.00 dBm Freq Value 20.00 dBm Freq Offset 0.00000 MHz Span 6.000000 MHz Span 0.000 MHz Span 0.000 MHz Freq Offset 0 Hz #Video BW 3.0000 MHz* Span 60 MHz Span 60 MHz Span 60 MHz Span 60 MHz				
#Res EW 1.0000 MHz 2 Metrics Total Channel Power Total Power Spectral Density	Sweep 1.00 ms (1001 pts) 10.10 dBm / 40.0 MHz -65.92 dBm/Hz Dec 15, 2022 3:34:40 AM				
Test Model	MAXIMUM CONDUCTED(AVERAGE) OUTPUT POWER 802.11n(HT40)				





8.3 MAXIMUM POWER SPECTRAL DENSITY

8.3.1 **Applicable Standard**

According to FCC Part15.247(e) and KDB 558074 D01 15.247 Meas Guidance v05r02

8.3.2 **Conformance Limit**

The transmitter power spectral density conducted from the transmitter to the antenna shall not be greater than 8 dBm in any 3 kHz band during any time interval of continuous transmission.

8.3.3 **Test Configuration**

Test according to clause 7.1 radio frequency test setup 1

8.3.4 **Test Procedure**

This procedure shall be used if maximum peak conducted output power was used to demonstrate compliance

The transmitter output (antenna port) was connected to the spectrum analyzer Set analyzer center frequency to DTS channel center frequency. Set the span to 1.5 times the DTS bandwidth.

Set the RBW to: 3 kHz

Set the VBW to:10 kHz.

Set Detector = peak.

Set Sweep time = auto couple.

Set Trace mode = max hold.

Allow trace to fully stabilize.

Use the peak marker function to determine the maximum amplitude level within the RBW. Note: If antenna Gain exceeds 6 dBi, then PSD Limit=8-(Gain- 6)

8.3.5 **Test Results**

Temperature:	23° C
Relative Humidity:	56%
ATM Pressure:	1011 mbar

Operation Mode	Channel Number	Channel Frequency (MHz)	Measurement Level (dBm/3kHz)	Limit (dBm/3kHz)	Verdict
802.11b	1	2412	-13.87	8	PASS
	6	2437	-13.89	8	PASS
	11	2462	-12.89	8	PASS
802.11g	1	2412	-18.66	8	PASS
	6	2437	-18.46	8	PASS
	11	2462	-17.24	8	PASS
802.11n (HT20)	1	2412	-18.83	8	PASS
	6	2437	-18.63	8	PASS
	11	2462	-17.49	8	PASS
802.11n (HT40)	3	2422	-21.85	8	PASS
	6	2437	-21.61	8	PASS
	9	2452	-20.94	8	PASS

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Power Spectral Density 802.11b

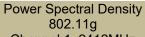


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Power Spectral Density 802.11g



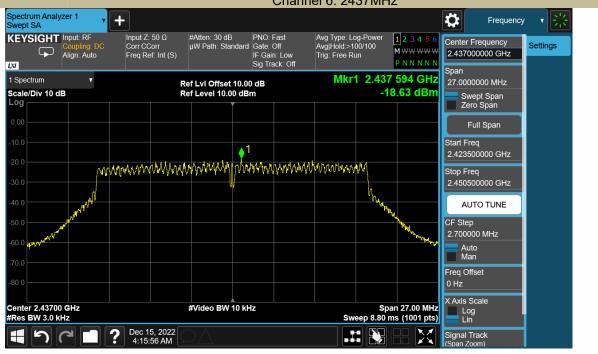
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东莞市信測科技有限公司 地址:广东省东莞市松山湖高新技术产业开发区新城大道9号中大海洋生物科技研发基地A区2号办公楼负一层、第二层 网址:Http://www.emtek.com.cn 邮箱:E-mail: project@emtek.com.cn Add: -1&2/F ., Building 2, Zone A, Zhongda Marine Biotechnology Research and Development Base , No.9, Xincheng Avenue, Songshanhu High-technology Industrial Development Zone, Dongquan, Guangdong, China Http://www.emtek.com.cn E-mail: project@emtek.com.cn





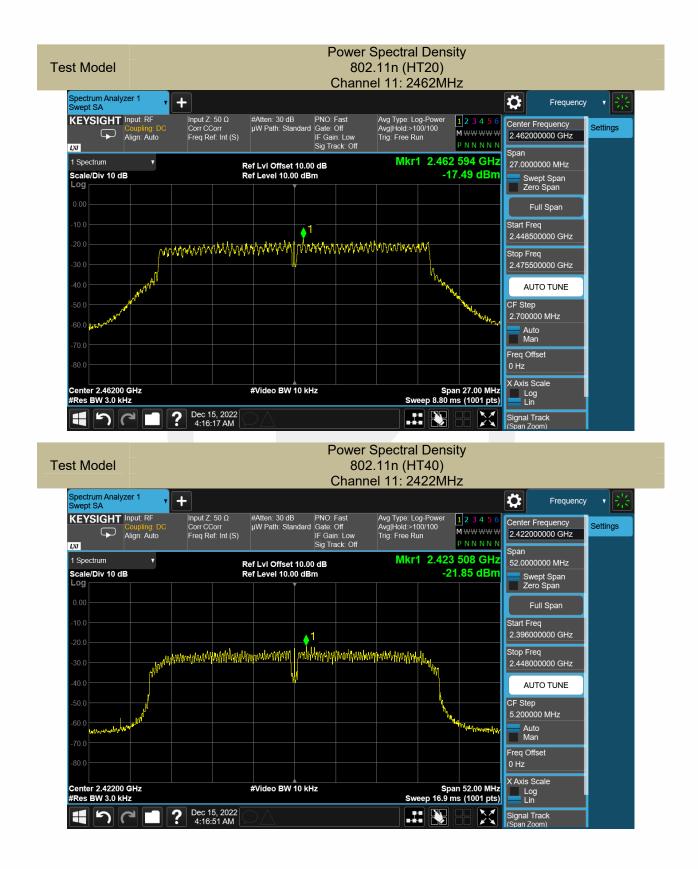
Power Spectral Density 802.11n (HT20) Channel 6: 2437MHz



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Full Span Start Freq 2.426000000 GHz

Stop Freq 2.478000000 GHz

AUTO TUNE

CF Step 5.200000 MHz Auto Man Freg Offset

X Axis Scale

Log Lin

Signal Track (Span Zoom)

Span 52.00 MHz

 \geq

Sweep 16.9 ms (1001 pts)

EY.



1 multuntun

www.www

MMMMMMMMMM

#Video BW 10 kHz

Www.ghwyW

Dec 15, 2022 4:17:48 AM

?

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东莞市信測科技有限公司 地址:广东省东莞市松山湖高新技术产业开发区新城大道9号中大海洋生物科技研发基地A区2号办公楼负一层、第二层 网址:Http://www.emtek.com.cn 邮箱:E-mail: project@emtek.com.cn Add: -1&2/F ...Building 2,Zone A,Zhongda Marine Biotechnology Research and Development Base "No.9, Xincheng Avenue, Songshanhu High-technology Industrial Development Zone, Dongquan, Guangdong, China Http://www.emtek.com.cn E-mail: project@emtek.com.cn

Center 2.45200 GHz

#Res BW 3.0 kHz

5

0



8.4 UNWANTED EMISSIONS IN NON-RESTRICTED FREQUENCY BANDS

8.4.1 Applicable Standard

According to FCC Part15.247(d) and KDB 558074 D01 15.247 Meas Guidance v05r02

8.4.2 Conformance Limit

According to FCC Part 15.247(d):

In any 100 kHz bandwidth outside the frequency band in which the spread spectrum or digitally modulated intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement, provided the transmitter demonstrates compliance with the peak conducted power limits. If the transmitter complies with the conducted power limits based on the use of RMS averaging over a time interval, as permitted under paragraph (b)(3) of this section, the attenuation required under this paragraph shall be 30 dB instead of 20 dB.

8.4.3 Test Configuration

Test according to clause 7.1 radio frequency test setup 1

8.4.4 Test Procedure

The transmitter output (antenna port) was connected to the spectrum analyzer

Reference level measurement

Establish a reference level by using the following procedure:

Set instrument center frequency to DTS channel center frequency.

Set the span to \geq 1.5 times the DTS bandwidth.

Set the RBW = 100 kHz.

Set the VBW \ge 3 x RBW.

Set Detector = peak.

Set Sweep time = auto couple.

Set Trace mode = max hold.

Allow trace to fully stabilize.

Use the peak marker function to determine the maximum PSD level.

Note that the channel found to contain the maximum PSD level can be used to establish the reference level.

Emission level measurement

Set the center frequency and span to encompass frequency range to be measured.

Set the RBW = 100 kHz.

Set the VBW =300 kHz.

Set Detector = peak

Sweep time = auto couple.

Trace mode = max hold.

Allow trace to fully stabilize.

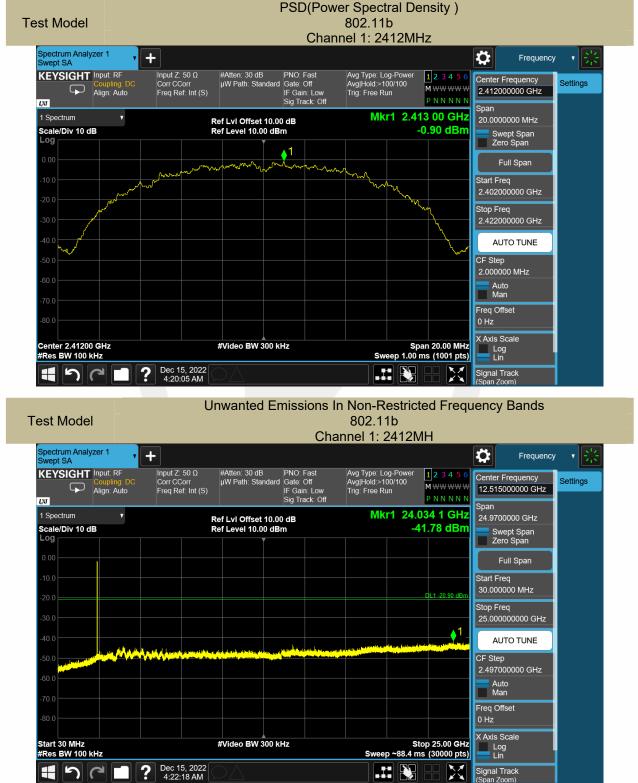
Use the peak marker function to determine the maximum amplitude level.

Ensure that the amplitude of all unwanted emissions outside of the authorized frequency band (excluding restricted frequency bands) are attenuated by at least the minimum requirements. Report the three highest emissions relative to the limit.

8.4.5 Test Results



All modes 2.4G 802.11b/g/n have been tested, and the worst result 802.11b recorded was report as below:



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