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# ELECTROMAGNETIC EMISSIONS COMPLIANCE REPORT





**Applicant:** silex technology, Inc.

2-3-1 Hikaridai, Seika-cho, Soraku-gun, Kyoto 619-0237,

Japan

Manufacturer: silex technology, Inc.

2-3-1 Hikaridai, Seika-cho, Soraku-gun, Kyoto 619-0237,

Japan

Product Name: AP-800AX

Brand Name: Silex Technology

Model No.: AP-800AX

Model Difference: N/A

Report Number: TERF2303000752ER

FCC ID N6C-AP800AX

IC: 4908A-AP800AX

Date of EUT Received: March 29, 2023

**Date of Test:** March 29, 2023 ~ May 11, 2023

Issue Date: July 20, 2023

Approved By\_

Blue Yang

# We hereby certify that:

The above equipment was tested by SGS Taiwan Ltd. Central RF Lab 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 comply with FCC rule part §15.247, ISED RSS-247.

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

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Revision History						
Report Number	Revision	Description	Issue Date	Revised By	Remark	
TERF2303000752ER	00	Original.	July 20, 2023	Susan Lin		

### Note:

1 . The remark "\*" indicates modification of the report upon requests from certification

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# **GENERAL INFORMATION**

#### 1.1 **Product Description**

Product Name:	AP-800AX
Brand Name:	Silex Technology
Model No.:	AP-800AX
Model Difference:	N/A
Hardware Version:	N/A
Firmware Version:	N/A
EUT Series No.:	000001814
Power Supply:	12Vdc
Test Software (Name/Version):	QRCT v4.0.211.0

#### 1.2 **RF Specification**

# WLAN 2.4GHz

Wi-Fi Frequency		Channels	Rated Pov	wer (dBm)	Modulation	
V V I - I I	Range	Charmeis	Peak	Avg.	Technology	
802.11b	2412~2462	11	25.74	22.97	DSSS	
802.11g	2412~2462	11	28.74	22.93	OFDM	
802.11n20	2412~2462	11	29.34	22.98	OFDM	
802.11n40	2422~2452	7	29.05	22.92	OFDM	
802.11ax20	2412~2462	11	29.86	22.99	OFDMA	
802.11ax40	2422~2452	7	29.56	22.46	OFDMA	
		CCK, DQPSK, DBPSK for DSSS				
Modulatio	Modulation type: 64QAM, 16QAM, QPSK, BPSK for OFDM			OFDM		
		1024 QAM,	, 256 QAM , 64QAM, 16QAM, QPSK,			
		BPSK for O	FDMA			
		802.11 b: 1/	1/2/5.5/11 Mbps			
802.11 g: 6			02.11 g: 6/9/12/18/24/36/48/54 Mbps			
Doto F	Poto:	802.11 n_20MHz:up to 144.4Mbps				
Data Rate:		802.11 n_40MHz:up to 300Mbps				
		802.11 ax_20MHz:up to 286.8Mbps				
		802.11 ax_40MHz:up to 573.6Mbps				

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### WLAN 2.4GHz for IC

WEATT 2.+GIIZ	Frequency	Charmala	Rated Pov	wer (dBm)	Rated Power	Modulation		
Wi-Fi	Range	Channels	Peak	Avg.	in dBm (EIRP)	Technology		
802.11b	2412~2462	11	25.74	22.97	27.18	DSSS		
802.11g	2412~2462	11	28.74	22.93	27.14	OFDM		
802.11n20	2412~2462	11	29.34	22.98	27.19	OFDM		
802.11n40	2422~2452	7	29.05	22.92	27.13	OFDM		
802.11ax20	2412~2462	11	29.86	22.99	27.20	OFDMA		
802.11ax40	2422~2452	7	29.56	22.46	26.67	OFDMA		
		CCK, DQPSK, DBPSK for DSSS						
Modulation	on type:	64QAM, 16QAM, QPSK, BPSK for OFDM						
	1024 QAM, 256 QAM, 64QAM, 16Q			QAM, QPSK, BPSK	for OFDMA			
		802.11 b: 1/2/5.5/11 Mbps						
		802.11 g: 6/9/12/18/24/36/48/54 Mbps						
Data F	Data Rate:		802.11 n_20MHz:up to 144.4Mbps					
Data Nate.		802.11 n_40MHz:up to 300Mbps						
		802.11 ax_20MHz:up to 286.8Mbps						
		802.11 ax_40MHz:up to 573.6Mbps						

# 1.3 Antenna Designation

Antenna Type	Ch0/Ch1	Antenna Part No.	Freq. (MHz)	Peak Antenna Gain (dBi)	Directional Gain (dBi)
Dinala	Ch0	ANTDP-039A0	2442-2462	1.2	4.21
Dipole	Ch1	AN1 DP-039A0	2412~2462	1.2	4.21

#### Note:

- 1. Pre-scanned was done on the above antennas, measurements were demonstrated by using the antenna with the highest gain as the worst case scenarios.
- 2. Antenna information is provided by the applicant.

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# Test Methodology of Applied Standards

FCC Part 15, Subpart C §15.247

FCC KDB 558074 D01 15.247 Meas Guidance v05r02

FCC KDB 662911 D01 Multiple Transmitter Output v02r01

RSS-247 issue 2 Feb. 2017

RSS-Gen, issue 5 April, 2018

ANSI C63.10:2013

#### 1.5 **Test Facility**

Laboratory	Test Site Address	Test Site Name	FCC Designa- tion number	IC CAB
		SAC 1		
		SAC 2		
		SAC 3		
	No.134, Wu Kung Road, New Taipei	Conduction 1		
		Conducted 1		
	Industrial Park, Wuku District, New	Conducted 2	TW0027	
	Taipei City, Taiwan.	Conducted 3		
		Conducted 4		
		Conducted 5		
SGS Taiwan Ltd.		Conducted 6		
Central RF Lab.		Conduction C		TW3702
		SAC C		
(TAF code 3702)		SAC D		
		SAC G		
	No 2 Kaji 1et Rd. Cujehan District	Conducted A		
	No.2, Keji 1st Rd., Guishan District,	Conducted B	TW0028	
	Taoyuan City, Taiwan 333	Conducted C		
		Conducted D		
		Conducted E		
		Conducted F		
		Conducted G		

Note: Test site name is remarked on the equipment list in each section of this report as an indication where measurements occurred in specific test site and address.

#### 1.6 **Special Accessories**

There are no special accessories used while test was conducted.

#### 1.7 **Equipment Modifications**

There was no modification incorporated into the EUT.

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# SYSTEM TEST CONFIGURATION

#### 2.1 **EUT Configuration**

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.

#### 2.2 **EUT Exercise**

An engineering test mode (software/firmware) that applicant provided was utilized to manipulate the EUT into transmit, selection of the test channel, and modulation scheme.

#### 2.3 **Test Procedure**

#### 2.3.1 **Conducted Emissions**

The EUT is a placed on a table which is 0.8 m above ground plane. Conducted emissions from the EUT measured in the frequency range between 0.15 MHz and 30MHz. The CISPR Quasi-Peak and Average detector mode is employed. The two LISNs provide 50uH/50 ohm of coupling impedance for the measuring instrument. Both lines of the power mains connected to the EUT were checked for maximum conducted interference.

#### 2.3.2 **Conducted Test (RF)**

The active antenna port of the unlicensed wireless device is connected to the spectrum analyzer with attenuator to protect the instrumentation. If a second antenna port is available, it is tested at one operating frequency, with other port(s) appropriately terminated, to verify it has similar output characteristics as the fully tested port.

#### 2.3.3 Radiated Emissions

The EUT is a placed on a turn table. For emissions testing at or below 1 GHz, the table height shall be 0.8 m above the reference ground plane. For emission measurements above 1 GHz, the table height shall be 1.5 m. The turn table shall rotate 360 degrees to determine the position of maximum emission level. EUT is set 3m away from the receiving antenna which varied from 1m to 4m to find out the highest emission. And also, each emission was to be maximized by changing the polarization of receiving antenna both horizontal and vertical. In order to find out the max. emission, the relative positions of this transmitter (EUT) was rotated through three orthogonal axes and measurement procedures for electric field radiated emissions above 1 GHz the EUT measurement is to be made "while keeping the antenna in the 'cone of radiation' from that area and pointed at the area both in azimuth and elevation, with polarization oriented for maximum response." is still within the 3dB illumination BW of the measurement antenna.

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# 2.4 Measurement Results Explanation Example

### 2.4.1 Radiated Emission Test Sites For Measurements From 9 kHz To 30 MHz

Radiated emission below 30MHz is measured in a 9m\*6m\*6m semi-anechoic chamber, the measurements correspond to those obtained at an open-field test site.

There is a comparison data of both open-field test site and semi-Anechoic chamber, and the result came out very similar.

### 2.4.2 For all conducted test items:

The offset level is set in the spectrum analyzer to compensate the RF cable loss and attenuation factor between EUT conducted port and spectrum analyzer. With the offset compensation, the spectrum analyzer reading level is exactly EUT RF output level.

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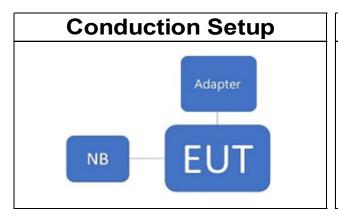
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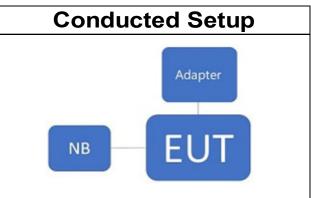


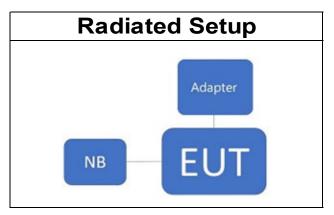
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# **Test Configuration**







#### 2.6 Control Unit(s)

AC Power-Line Conducted Emission Test Site: Conduction 1					
EQUIPMENT TYPE MFR MODEL NUMBER SERIAL NUMBER LAST CAL. CAL DUE.					CAL DUE.
Notebook	DELL	Latitude 5590	3R9FST2	N/A	N/A
Adapter	ADAPTER	ATS036T-A120	N/A	N/A	N/A

Conducted Emission Test Site: Conducted 2					
EQUIPMENT TYPE	MFR	MODEL NUMBER	SERIAL NUMBER	LAST CAL.	CAL DUE.
Notebook	DELL	Latitude 5590	3R9FST2	N/A	N/A
Adapter	ADAPTER	ATS036T-A120	N/A	N/A	N/A

Radiated Emission Test Site: SAC 3					
EQUIPMENT TYPE MFR MODEL NUMBER SERIAL NUMBER LAST CAL. CAL DUE.				CAL DUE.	
Notebook	DELL	Latitude 5590	3R9FST2	N/A	N/A
Adapter	ADAPTER	ATS036T-A120	N/A	N/A	N/A

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# SUMMARY OF TEST RESULTS

FCC Rules	ISED Rules	Description Of Test	Result
§15.207(a)	RSS-Gen §8.8	AC Power Line Conducted Emission	Compliant
§15.247(b)	RSS-247 §5.4 d	Peak Output Power	Compliant
§15.247(a)(2)	RSS-247 §5.2 a RSS-Gen §6.7	Emission Bandwidth	Compliant
§15.205 §15.209 §15.247(d)	RSS-247 §5.5 RSS-Gen §8.9 RSS-Gen §8.10 RSS-Gen §6.13	Radiated & Conducted Band Edge and Spurious Emission	Compliant
§15.247(e)	RSS-247 §5.2 b	Power Spectral Density	Compliant
§15.203	N/A	Antenna Requirement	Compliant

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# **DESCRIPTION OF TEST MODES**

#### 4.1 **Operatin Frequencies**

Modulation	of BW 20MHz	Modulation of BW 40MHz		
CHANNEL	FREQUENCY (MHz)	CHANNEL	FREQUENCY (MHz)	
1	2412	3	2422	
2	2417	4	2427	
3	2422	5	2432	
4	2427	6	2437	
5	2432	7	2442	
6	2437	8	2447	
7	2442	9	2452	
8	2447			
9	2452			
10	2457			
11	2462			

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#### The Worst Test Modes and Channel Details

- 1. The EUT has been tested under operating condition.
- 2. Test program used to control the EUT for staying in continuous transmitting and receiving mode is programmed.
- 3. Investigation has been done on all the possible configurations for searching the worst case.

The given UE is pre-scanned among below modes.

								Single Transmission		Multi			
	Modulation Transmission Chain				Transmission								
									Spatial Spatial				
٧	802.11 b	٧	Ch0	٧	Ch1		Ch2		Ch3		1TX	٧	2TX
٧	802.11 g	٧	Ch0	٧	Ch1		Ch2		Ch3		1TX	٧	2TX
٧	802.11 n	٧	Ch0	٧	Ch1		Ch2		Ch3		1TX	٧	2TX
٧	802.11 ax	٧	Ch0	٧	Ch1		Ch2		Ch3		1TX	٧	2TX

- 4. Therefore, below summary is the modes of test configuration that yield the highest reading and generate the highest emission chosen to carry out the relevantly mandatory test items.
- 5. Observations have been done for 802.11 ax available RU configurations below and found that the lowest, heighest and Full RU results higher emissions. Only one RU can be enabled at any given time.

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<b>8</b> 02.11ax		20	MHz			<b>8</b> 02.11ax			40MHz	
RU type	26	6-tone RU	5	2-tone RU		RU type	26-	tone RU		52-tone RU
	RU0	[-121: -96]	RU37	[-121: -70]			RU0	[-243: -218]	RU37	[-243: -192]
	RU1	[-95: -70]	RU38	[-68: -17]			RU1	[-217: -192]	RU38	[-189: -138]
	RU2	[-68: -43]	RU39	[17: 68]			RU2	[-189: -164]	RU39	[-109: -58]
	RU3	[-42: -17]	RU40	[70: 121]			RU3	[-163: -138]	RU40	[-55: -4]
	RU4	[-16: -4, 4: 16]	RU41	N/A			RU4	[-136: -111]	RU41	[4: 55]
	RU5	[17: 42]	RU42	N/A			RU5	[-109: -84]	RU42	[58: 109]
	RU6	[43: 68]	RU43	N/A			RU6	[-83: -58]	RU43	[138: 189]
	RU7	[70: 95]	RU44	N/A			RU7	[-55: -30]	RU44	[192: 243]
	RU8	[96: 121]	RU45	N/A			RU8	[-29: -4]	RU45	N/A
	RU9	N/A	RU46	N/A			RU9	[4: 29]	RU46	N/A
	RU10	N/A	RU47	N/A			RU10	[30: 55]	RU47	N/A
	RU11	N/A	RU48	N/A			RU11	[58: 83]	RU48	N/A
	RU12	N/A	RU49	N/A			RU12	[84: 109]	RU49	N/A
	RU13	N/A	RU50	N/A			RU13	[111: 136]	RU50	N/A
	RU14	N/A	RU51	N/A			RU14	[138: 163]	RU51	N/A
	RU15	N/A	RU52	N/A			RU15	[164: 189]	RU52	N/A
	RU16	N/A				RU index and	RU16	[192: 217]		
RU index and	RU17	N/A	10	06-tone RU			RU17	[218: 243]	1	06-tone RU
subcarrier	RU18	N/A	RU53	[-122: -17]		subcarrier	RU18	N/A	RU53	[-243: -138]
range	RU19	N/A	RU54	[17: 122]		range	RU19	N/A	RU54	[-109: -4]
	RU20	N/A	RU55	N/A			RU20	N/A	RU55	[4: 109]
	RU21	N/A	RU56	N/A			RU21	N/A	RU56	[138: 243]
	RU22	N/A	RU57	N/A			RU22	N/A	RU57	N/A
	RU23	N/A	RU58	N/A			RU23	N/A	RU58	N/A
	RU24	N/A	RU59	N/A			RU24	N/A	RU59	N/A
	RU25	N/A	RU60	N/A			RU25	N/A	RU60	N/A
	RU26	N/A					RU26	N/A		
	RU27	N/A	24	42-tone RU			RU27	N/A		42-tone RU
	RU28	N/A	RU61	[-122: -2, 2:122]			RU28	N/A	RU61	[-244: -3]
	RU29	N/A	RU62	N/A			RU29	N/A	RU62	[3: 244]
	RU30	N/A	RU63	N/A			RU30	N/A	RU63	N/A
	RU31	N/A	RU64	N/A		[	RU31	N/A	RU64	N/A
	RU32	N/A					RU32	N/A		
	RU33	N/A					RU33	N/A		84-tone RU
	RU34	N/A					RU34	N/A	RU65	[-244: -3, 3: 244]
	RU35	N/A					RU35	N/A	RU66	N/A
	RU36	N/A					RU36	N/A		

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	Conducted										
MODE	AVAILABLE CHANNEL	TESTED CHANNEL	MODULATION	DATA RATE (Mbps)	ANTENNA PORT						
802.11b	1 to 11	1,4,6,8,11	DSSS	1	2TX						
802.11g	1 to 11	1,4,6,8,11	OFDM	6	2TX						
802.11n (HT20)	1 to 11	1,4,6,8,11	OFDM	MCS0	2TX						
802.11n (HT40)	3 to 9	3,5,6,7,9	OFDM	MCS0	2TX						
802.11ax (HE20)	1 to 11	1,4,6,8,11	OFDMA	MCS0	2TX						
802.11ax (HE40)	3 to 9	3,5,6,7,9	OFDMA	MCS0	2TX						

RADIATED EMISSION TEST (BELOW 1 GHz)									
MODE	AVAILABLE CHANNEL	TESTED CHANNEL	MODULATION	DATA RATE (Mbps)	ANTENNA PORT				
802.11g	1 to 11	6	OFDM	6	2TX				

RADIATED EMISSION TEST (ABOVE 1 GHz)									
MODE	AVAILABLE CHANNEL	TESTED CHANNEL	MODULATION	DATA RATE (Mbps)	ANTENNA PORT				
802.11b	1 to 11	1,4,6,8,11	DSSS	1	2TX				
802.11g	1 to 11	1,4,6,8,11	OFDM	6	2TX				
802.11n (HT20)	1 to 11	1,4,6,8,11	OFDM	MCS0	2TX				
802.11n (HT40)	3 to 9	3,5,6,7,9	OFDM	MCS0	2TX				
802.11ax (HE20)	1 to 11	1,4,6,8,11	OFDMA	MCS0	2TX				
802.11ax (HE40)	3 to 9	3,5,6,7,9	OFDMA	MCS0	2TX				

### Note:

The field strength of radiated emission was measured as the EUT positioned in different orthogonal planes (E1/E2/H) based on actual usage of the EUT to pre-scan the emissions for determining the worst case scenario.

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# 5 MEASUREMENT UNCERTAINTY

Test Items	Un	certain	ty
AC Power Line Conducted Emission	+/-	2.32	dB
Output Power measurement	+/-	1	dB
Emission Bandwidth	+/-	1.53	Hz
Undesignable radiated emission measurement	+/-	1.68	dB
Peak Power Density	+/-	2.16	dB
Temperature	+/-	0.7	°C
Humidity	+/-	3	%
DC / AC Power Source	+/-	1	%

Radiated Spurious Emission Measurement Uncertainty						
	+/-	2.8	dB	9kHz~30MHz		
Delevinetien, Vertical	+/-	4.82	dB	30MHz - 1000MHz		
Polarization: Vertical	+/-	4.37	dB	1GHz - 18GHz		
	+/-	4.21	dB	18GHz - 40GHz		
	+/-	2.8	dB	9kHz~30MHz		
Dalawi-atiawa Hawi-awtal	+/-	4.54	dB	30MHz - 1000MHz		
Polarization: Horizontal	+/-	4.37	dB	1GHz - 18GHz		
	+/-	4.21	dB	18GHz - 40GHz		

#### Note:

- 1. This uncertainty represents an expanded uncertainty expressed at approximately the 95% confidence level using a coverage factor of k=2.
- 2. The conformity assessment statement in this report is based solely on the test results, measurement uncertainty is excluded.

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# 6 MEASUREMENT EQUIPMENT USED

# 6.1 Emission from AC power line

	AC Power-Line Conducted Emission Test Site: Conduction 1								
EQUIPMENT TYPE MFR MODEL NUMBER SERIAL NUMBER LAST CAL. CAL DUE.									
EMI Test Receiver	R&S	ESR 7	102525	02/18/2023	02/17/2024				
Pulse Limiter	SCHWARZBECK	VTSD 9561F-N	793	06/22/2022	06/21/2023				
LISN	SCHWARZBECK	NSLK 8127	01040	08/23/2022	08/22/2023				
Coaxial Cables	EMC Instruments Corp.	EMCCFD300-BM- BM-3000	161207	06/22/2022	06/21/2023				
Test Software	audix	e3	Ver. 9 210322	N.C.R	N.C.R				

### 6.2 Condcuted Measurement

	Conducted Emission Test Site: Conducted 2								
EQUIPMENT TYPE MFR MODEL NUMBER SERIAL NUMBER LAST CAL. CAL DUE.									
EXA Spectrum Analyzer	KEYSIGHT	N9010B	MY59071541	07/14/2022	07/13/2023				
Test Software	SGS Radio Tes Software		Ver. 21	N.C.R	N.C.R				
Power Meter	Anritsu	ML2496A	2132007	09/21/2022	09/20/2023				
Power Sensor	Anritsu	MA2411B	1911391	09/21/2022	09/20/2023				
Power Sensor	Anritsu	MA2411B	1911392	09/21/2022	09/20/2023				
Attenuator	Mini-Circuit	BW-S10W2+	4	12/13/2022	12/12/2023				
DC Block	Mini-Circuits	BLK-18-S+	1	12/13/2022	12/12/2023				

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#### 6.3 **Radiated Measurement**

		Radiated Emissio	n Test Site: SAC 3		
EQUIPMENT TYPE	MFR	MODEL NUMBER	SERIAL NUMBER	LAST CAL.	CAL DUE.
Horn Antenna	SCHWARZBECK	BBHA9170	BBHA9170 184		12/29/2023
Horn Antenna	SCHWARZBECK	BBHA9120D	1441	09/27/2022	09/26/2023
Bi-log Antenna	SCHWARZBECK	VULB9168	378	08/15/2022	08/14/2023
Loop Antenna	ETS.LINDGREN	6502	148045	10/05/2022	10/04/2023
Spectrum Analyzer	Agilent	E4446A	MY51100003	10/28/2022	10/27/2023
EMI Test Receiver	R&S	ESCI 7	100759	08/22/2022	08/21/2023
Pre-Amplifier	EMC Instruments	EMC118A45SEE	980868	12/13/2022	12/12/2023
Pre-Amplifier	EMC Instruments	EMC184045B	980135	10/27/2022	10/26/2023
Pre-Amplifier	HP	8447D	2944A07676	12/13/2022	12/12/2023
Attenuator	Mini-Circuit	BW-S10W2+	4	12/13/2022	12/12/2023
Filter 2400-2483.5 MHz	EWT	EWT-14-0166	M1	12/13/2022	12/12/2023
High Pass Filter	WI	WHKX4.0/18G- 10SS	22	12/13/2022	12/12/2023
Coaxial Cable	Huber Suhner	SUCOFLEX 104PEA	MY4251/4PEA	12/13/2022	12/12/2023
Coaxial Cable	EMC Instruments	EMC 107-SM-SM- 500	221104	12/13/2022	12/12/2023
Coaxial Cable	EMC Instruments	EMC 107-SM-SM- 1000	221103	12/13/2022	12/12/2023
Coaxial Cable	EMC Instruments	EMC 107-SM-SM- 1500	221110	12/13/2022	12/12/2023
Coaxial Cable	EMC Instruments	EMC 107-SM-SM- 8000	221109	12/13/2022	12/12/2023
Site Cal	SGS	SAC 3	N/A	01/01/2023	12/31/2023
Test Software	audix	e3	Ver. 9 210322	N.C.R	N.C.R

**NOTE:** N.C.R refers to Not Calibrated Required.

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### 7 CONDUCTED EMISSION TEST

# 7.1 Standard Applicable

Frequency range within 150kHz to 30MHz shall not exceed the Limit table as below.

Frequency range		mits BuV)
MHz	Quasi-peak	Average
0.15 to 0.50	66 to 56	56 to 46
0.50 to 5	56	46
5 to 30	60	50

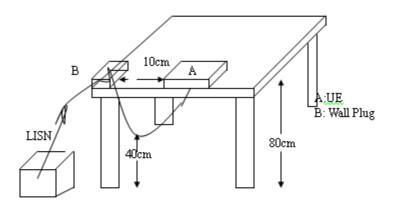
#### Note

- 1. The lower limit shall apply at the transition frequencies
- 2. The limit decreases linearly with the logarithm of the frequency in the range 0.15 MHz to 0.50 MHz

# 7.2 EUT Setup

- 1. The conducted emission tests were performed in the test site, using the setup in accordance with the ANSI C63.10:2013.
- 2. The AC/DC Power adaptor of EUT was plug-in LISN. The EUT was placed flushed with the rear of the table.
- 3. The LISN was connected with 120Vac/60Hz power source.

### 7.3 Test Setup



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### 7.4 Measurement Procedure

- 1. The EUT was placed on a table which is 0.8m above ground plane.
- 2. Maximum procedure was performed on the six highest emissions to ensure EUT compliance.
- 3. Repeat above procedures until all phases of power being supplied by given UE are completed

#### 7.5 Measurement Result

Note: Refer to next page for measurement data and plots.

Note2: The \* reveals the worst-case results that closest to the limit.

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# AC POWER LINE CONDUCTED EMISSION TEST DATA

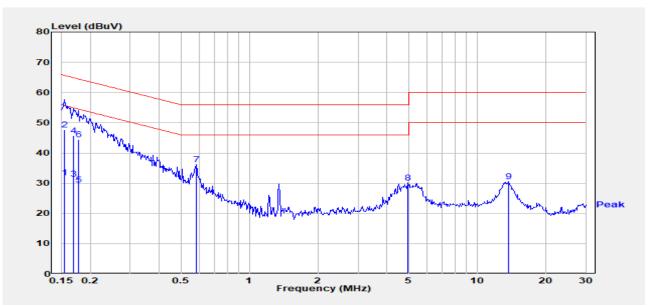
**Test Site** Report Number :Conduction 1 :TERF2303000752ER

Test Mode :Operation (WLAN2.4G) Test Date :2023-04-21

:120V/60Hz Power Temp./Humi. :26.5/55

Probe :L Engineer :Nick Lin

Note:



Freq.	Detector	Spectrum	Factor	Actual	Limit	Margin
	Mode	Reading Level		FS		-
MHz	PK/QP/AV	dΒμV	dB	dΒμV	dΒμV	dB
0.153	Average	21.71	10.25	31.96	55.81	-23.85
0.153	QP	37.52	10.25	47.77	65.81	-18.04
0.170	Average	21.09	10.25	31.34	54.98	-23.64
0.170	QP	35.51	10.25	45.76	64.98	-19.22
0.178	Average	19.26	10.25	29.51	54.60	-25.09
0.178	QP	34.12	10.25	44.37	64.60	-20.23
0.584	Peak	25.92	10.28	36.19	56.00	-19.81
4.975	Peak	19.61	10.54	30.15	56.00	-25.85
13.814	Peak	19.83	10.78	30.60	60.00	-29.40

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:Conduction 1

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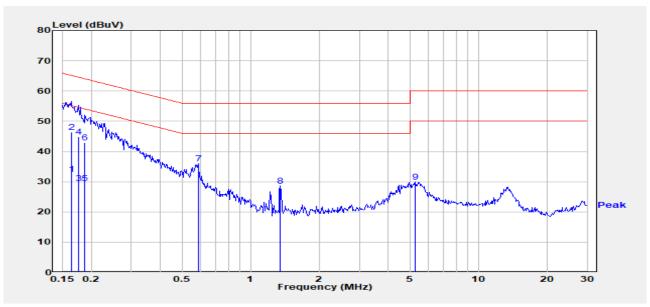
Report Number :TERF2303000752ER Test Site

Test Mode :Operation (WLAN2.4G) Test Date :2023-04-21

Power :120V/60Hz Temp./Humi. :26.5/55

Probe :N Engineer :Nick Lin

Note: :



Freq.	Detector	Spectrum	Factor	Actual	Limit	Margin
	Mode	Reading Level		FS		
MHz	PK/QP/AV	dΒμV	dB	dΒμV	dΒμV	dB
0.163	Average	22.18	10.25	32.43	55.30	-22.87
0.163	QP	36.22	10.25	46.47	65.30	-18.83
0.176	Average	19.22	10.25	29.47	54.66	-25.19
0.176	QP	34.53	10.25	44.78	64.66	-19.88
0.187	Average	19.18	10.25	29.43	54.15	-24.72
0.187	QP	32.76	10.25	43.01	64.15	-21.14
0.588	Peak	25.72	10.28	36.00	56.00	-20.00
1.349	Peak	17.90	10.67	28.57	56.00	-27.43
5.290	Peak	19.30	10.56	29.86	60.00	-30.14

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# 8 PEAK OUTPUT POWER MEASUREMENT

# 8.1 Standard Applicable

# 8.2 Duty Cycle

Pre-analysis Check: While conducting average power measurement, duty cycle of each mode shall be checked to ensure its duty cycle in order to compensate for the loss due to insufficient ratio of duty cycle.

All duty cycle is pre-scanned, and result as obtained below shows only the most representative ones where duty cycle is conducted as the given transmission with given virtual operation that expresses the percentage.

### 8.3 Output Power

For systems using digital modulation in the 2400-2483.5 MHz bands, the limit for peak output power is 1Watt and the e.i.r.p. shall not exceed 4 W.

If the transmitting antenna of directional gain greater than 6dBi are used the peak output power form the intentional radiator shall be reduced below the above stated value by the amount in dB that the directional gain of the Antenna exceeds 6dBi.

In case of point-to-point operation, the limit has to be reduced by 1dB for every 3dB that the directional gain of Antenna exceeds 6dBi.

### Note:

As per section F. 2). e). (ii) of FCC KDB 662911 D01

If antenna gains are not equal and each transmit antenna is driven by only one spatial stream, directional gain may be calculated by either of the following formulas.

• Directional Gain = 
$$10 \cdot \log \left[ \frac{\sum_{j=1}^{N_{SS}} \left\{ \sum_{k=1}^{N_{ANT}} g_{j,k} \right\}^{2}}{N_{ANT}} \right]$$

### where

Each antenna is driven by no more than one spatial stream;

NSS = the number of independent spatial streams of data;

NANT = the total number of antennas

 $g_{j,k} = 10^{Gk/20}$  if the kth antenna is being fed by spatial stream j, or zero if it is not;

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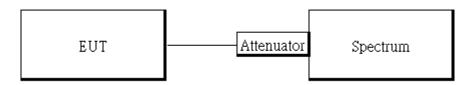
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G<sub>k</sub> is the gain in dBi of the kth antenna.

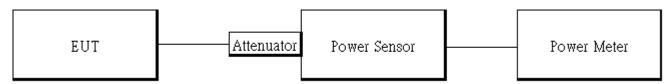
The antenna gain is not greater than 6 dBi. Therefore, reduction of power is not required.

# 8.4 Test Setup

### 8.4.1 Duty Cycle



### 8.4.2 Output Power:



### 8.5 Measurement Procedure

### 8.5.1 Duty Cycle:

- 1. Set span = Zero
- 2. RBW = 8MHz
- 3. VBW = 8MHz,
- 4. Detector = Peak

### 8.5.2 Output Power

- 1. Place the EUT on the table and set it in transmitting mode.
- The testing follows the Measurement Procedure of FCC KDB 558074 D01 DTS Meas. Guidance.
- 3. Remove the antenna from the EUT and then connect a low loss RF cable from the antenna port to the power meter.

### **Power Meter:**

It is used as the auxiliary test equipment to conduct the output power measurement.

- 4. Record the max. Reading as observed from Spectrum or Power Meter.
- 5. MIMO mode: offset is set with "measure and add 10 Log (N)" to measurement for MIMO mode. Offset = cable loss + 10 log (N), where N is number of transmitting antenna, cable loss is specified below.

\* Note: The duty cycle factor and below is compensated to obtain the maximum value of measurement in average.

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### 8.6 Measurement Result

# 8.6.1 Duty Cycle:

	Duty Cycle (%) = Ton / (Ton+Toff)	Duty Factor (dB) =10*log ( 1/Duty Cycle )	1/T (kHz)	VBW setting (kHz)
802.11b	83.98	0.76	0.08	1.00
802.11g	96.11	0.17	0.51	1.00
802.11n_20	80.41	0.95	0.18	1.00
802.11n_40	80.32	0.95	0.18	1.00
802.11ax_20	80.51	0.94	0.18	1.00
802.11ax_40	80.38	0.95	0.18	1.00

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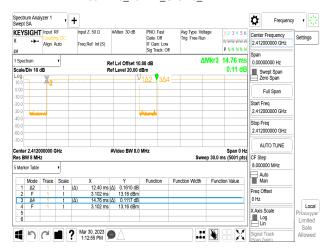
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#### 8.6.2 **Duty Cycle test plots**

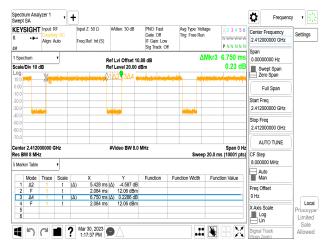
802.11b 20MHz Chain0 2412MHz



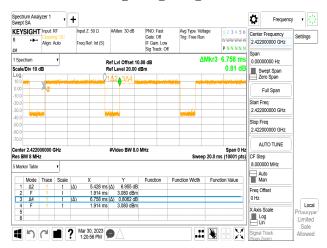
802.11g\_20MHz\_Chain0\_2412MHz



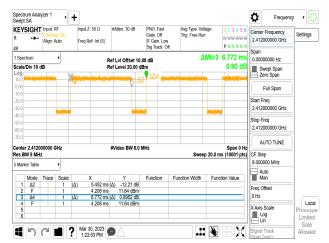
802.11n 20MHz Chain0 2412MHz



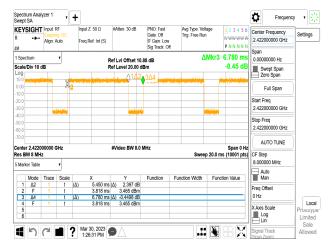
802.11n 40MHz Chain0 2422MHz



802.11ax 20MHz Chain0 2412MHz



802.11ax\_40MHz\_Chain0\_2422MHz



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#### **Output Power** 8.6.3

	1b Ch0			Peak Output		
СН	Freq.	Data	Power	Power	Limit	RESULT
	(MHz)	Rate	set	(dBm)	(dBm)	
1	2412	1	18	20.36	30.00	PASS
4	2427	1	19.5	22.25	30.00	PASS
6	2437	1	19.5	21.91	30.00	PASS
8	2447	1	20	22.08	30.00	PASS
11	2462	1	18.5	20.47	30.00	PASS
802.1°	1b Ch0		•		•	•
				Max. Avg. Output		
СН	Freq.	Freq. Data Power		include tune up	Limit	RESULT
CII	(MHz)	Rate	set	tolerance Power	(dBm)	RESULT
				(dBm)		
1	2412	1	18	17.68	30.00	PASS
4	2427	1	19.5	19.78	30.00	PASS
6	2437	1	19.5	19.63	30.00	PASS
8	2447	1	20	19.75	30.00	PASS
11	2462	1	18.5	17.95	30.00	PASS
802.1	1b Ch1		•		•	•
	Freq.	Data	Power	Peak Output	Limit	
СН	(MHz)	Rate	set	Power	(dBm)	RESULT
	(2)	11010		(dBm)	(42)	
1	2412	1	18.5	20.06	30.00	PASS
4	2427	1	19.5	21.77	30.00	PASS
6	2437	1	20	21.58	30.00	PASS
8	2447	1	19.5	21.95	30.00	PASS
11	2462	1	19	20.26	30.00	PASS
802.1	1b Ch1					
				Max. Avg. Output		
СН	Freq.	Data	Power	include tune up	Limit	RESULT
<b>U</b>	(MHz)	Rate	set	tolerance Power	(dBm)	KLOOLI
				(dBm)		
1	2412	1	18.5	17.61	30.00	PASS
4	2427	1	19.5	19.68	30.00	PASS
6	2437	1	20	19.54	30.00	PASS
8	2447	1	19.5	19.56	30.00	PASS
						PASS

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СН	Freq. (MHz)	·	Power	Peak Output Power		Total Peak Output Power	Limit (dBm)	RESULT
	(141112)	Nate	361	Ch0	Ch1	(dBm)	(abiii)	
1	2412	1	18.5	20.74	20.64	23.70	30.00	PASS
4	2427	1	20.5	22.77	22.69	25.74	30.00	PASS
6	2437	1	20.5	22.57	22.42	25.51	30.00	PASS
8	2447	1	20.5	22.73	22.44	25.60	30.00	PASS
11	2462	1	19	20.52	20.29	23.42	30.00	PASS
802.1	1b_2TX				-			•
				Avg. C	Output	Max. Avg. Output		
СН	Freq.	Data	Power	Po	wer	include tune up	Limit	RESULT
CII	(MHz)	Rate	set	(dE	Bm)	tolerance Power	(dBm)	KLOULI
				Ch0	Ch1	(dBm)		
1	2412	1	18.5	18.04	17.89	20.97	30.00	PASS
4	2427	1	20.5	20.03	19.89	22.97	30.00	PASS
6	2437	1	20.5	19.81	19.67	22.75	30.00	PASS
U	<del>                                     </del>	1	20.5	19.88	19.75	22.82	30.00	PASS
8	2447	l	20.5	19.00	13.73	22.02	00.00	1 17,000

802.1	1g Ch0					
СН	Freq. (MHz)	Data Rate	Power set	Peak Output Power (dBm)	Limit (dBm)	RESULT
1	2412	6	15.5	20.43	30.00	PASS
4	2427	6	20.5	25.71	30.00	PASS
6	2437	6	20.5	25.61	30.00	PASS
8	2447	6	20.5	25.72	30.00	PASS
11	2462	6	16	20.46	30.00	PASS
802.1	1g Ch0				-	
СН	Freq.	Data Rate	Power set	Max. Avg. Output include tune up tolerance Power	Limit (dBm)	RESULT
				(dBm)		
1	2412	6	15.5	14.78	30.00	PASS
4	2427	6	20.5	19.98	30.00	PASS
6	2437	6	20.5	19.85	30.00	PASS
8	2447	6	20.5	19.96	30.00	PASS
11	2462	6	16	14.82	30.00	PASS

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302.1°	1g Ch1					
СН	Freq. (MHz)	Data Rate	Power set	Peak Output Power (dBm)	Limit (dBm)	RESULT
1	2412	6	15.5	20.30	30.00	PASS
4	2427	6	20.5	25.49	30.00	PASS
6	2437	6	20.5	25.21	30.00	PASS
8	2447	6	20.5	25.38	30.00	PASS
11	2462	6	16	20.17	30.00	PASS
302.1°	1g Ch1		•			
				Max. Avg. Output		
СН	Freq.	Data	Power	include tune up	Limit	DECLUT
СН	(MHz)	Rate	set	tolerance Power	(dBm)	RESULT
				(dBm)		
1	2412	6	15.5	14.61	30.00	PASS
4	2427	6	20.5	19.65	30.00	PASS
6	2437	6	20.5	19.52	30.00	PASS
8	2447	6	20.5	19.56	30.00	PASS
11	2462	6	16	14.55	30.00	PASS

802.1	1g_2TX							
СН	Freq.	Data Rate	Power set		Output wer	Total Peak Output Power	Limit (dBm)	RESULT
	(141112)	Nate	361	Ch0	Ch1	(dBm)	(dbiii)	
1	2412	6	15.5	20.48	20.38	23.44	30.00	PASS
4	2427	6	20.5	25.78	25.68	28.74	30.00	PASS
6	2437	6	20.5	25.63	25.27	28.46	30.00	PASS
8	2447	6	20.5	25.83	25.41	28.64	30.00	PASS
11	2462	6	15.5	20.47	20.25	23.37	30.00	PASS
802.1	1g_2TX				•	•		
				Avg. 0	Output	Max. Avg. Output		
СН	Freq.	Data	Power	Po	wer	include tune up	Limit	RESULT
СП	(MHz)	Rate	set	(dE	Bm)	tolerance Power	(dBm)	RESULT
				Ch0	Ch1	(dBm)		
1	2412	6	15.5	14.79	14.66	17.74	30.00	PASS
4	2427	6	20.5	19.99	19.85	22.93	30.00	PASS
6	2437	6	20.5	19.88	19.55	22.73	30.00	PASS
8	0447	^	00.5	40.00	10 E0	00.00	20.00	PASS
0	2447	6	20.5	19.98	19.59	22.80	30.00	PASS

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		<b>D</b> (		Peak Output		
СН	Freq.	Data	Power	Power	Limit	RESULT
	(MHz)	Rate	set	(dBm)	(dBm)	
1	2412	MCS0	16	21.10	30.00	PASS
4	2427	MCS0	21	26.40	30.00	PASS
6	2437	MCS0	21	26.37	30.00	PASS
8	2447	MCS0	21	26.39	30.00	PASS
11	2462	MCS0	16	20.83	30.00	PASS
302.1°	1n_HT_20	M Ch0				
				Max. Avg. Output		
СН	Freq.	Data	Power	include tune up	Limit	RESULT
•	(MHz)	Rate	set	tolerance Power	(dBm)	I KLOOL I
				(dBm)		
1	2412	MCS0	16	14.98	30.00	PASS
4	2427	MCS0	21	19.98	30.00	PASS
6	2437	MCS0	21	19.96	30.00	PASS
8	2447	MCS0	21	19.97 30.00		PASS
11	2462	MCS0	16	14.71	30.00	PASS
802.1	1n_HT_20	DM Ch1				
	Freq.	Data	Power	Peak Output	Limit	
СН	(MHz)	Rate	set	Power	(dBm)	RESULT
	(141112)	Nate	361	(dBm)	(abiii)	
1	2412	MCS0	16	20.69	30.00	PASS
4	2427	MCS0	21	25.88	30.00	PASS
6	2437	MCS0	21	25.82	30.00	PASS
8	2447	MCS0	21	25.86	30.00	PASS
	' ' '					
11	2462	MCS0	16	20.64	30.00	PASS
11		MCS0	16	20.64	30.00	PASS
11	2462	MCS0	16	20.64 Max. Avg. Output	30.00	PASS
11 <b>802.1</b>	2462	MCS0	16 Power		30.00 <b>Limit</b>	
11	2462 1n_HT_20	MCS0 DM Ch1		Max. Avg. Output		PASS RESULT
11 <b>802.1</b>	2462 1n_HT_20 Freq.	MCS0 OM Ch1 Data	Power	Max. Avg. Output include tune up	Limit	
11 <b>802.1</b>	2462 1n_HT_20 Freq.	MCS0 OM Ch1 Data	Power	Max. Avg. Output include tune up tolerance Power	Limit	
11 <b>802.1</b> CH	2462 1n_HT_20 Freq. (MHz)	MCS0 OM Ch1  Data Rate	Power set	Max. Avg. Output include tune up tolerance Power (dBm)	Limit (dBm)	RESULT
11 <b>802.1</b> <b>CH</b>	2462 1n_HT_20 Freq. (MHz)	MCS0  DM Ch1  Data Rate  MCS0	Power set	Max. Avg. Output include tune up tolerance Power (dBm)	Limit (dBm)	<b>RESULT</b> PASS
11 802.1 CH	2462 1n_HT_20 Freq. (MHz) 2412 2427	MCS0  Data Rate  MCS0  MCS0  MCS0	Power set	Max. Avg. Output include tune up tolerance Power (dBm) 14.67 19.91	Limit (dBm) 30.00 30.00	PASS PASS
11 802.1 CH 1 4 6	2462 1n_HT_20 Freq. (MHz) 2412 2427 2437	MCS0  Data Rate  MCS0  MCS0  MCS0  MCS0	Power set  16 21 21	Max. Avg. Output include tune up tolerance Power (dBm) 14.67 19.91 19.54	Limit (dBm)  30.00  30.00  30.00	PASS PASS PASS

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СН	Freq.	•	Power	Peak Output Power		Total Peak Output Power	Limit	RESULT
	(MHz)	Kale	set	Ch0	Ch1	(dBm)	(dBm)	
1	2412	MCS0	16	21.15	20.73	23.96	30.00	PASS
4	2427	MCS0	21	26.42	26.23	29.34	30.00	PASS
6	2437	MCS0	21	26.38	25.87	29.14	30.00	PASS
8	2447	MCS0	21	26.48	25.91	29.21	30.00	PASS
11	2462	MCS0	16.5	21.13	20.89	24.02	30.00	PASS
802.1	1n_HT20M_	2TX	•		•			•
				Avg. C	Output	Max. Avg. Output		
СН	Freq.	Data	Power	Po	wer	include tune up	Limit	RESULT
CII	(MHz)	Rate	set	(dE	3m)	tolerance Power	(dBm)	KLSULI
				Ch0	Ch1	(dBm)		
1	2412	MCS0	16	15.00	14.81	17.91	30.00	PASS
4	2427	MCS0	21	20.00	19.94	22.98	30.00	PASS
6	2437	MCS0	21	20.02	19.55	22.80	30.00	PASS
8	2447	MCS0	21	20.03	19.84	22.94	30.00	PASS
								PASS

802.1	1n_HT_40	M Ch0				
СН	Freq. (MHz)	Data Rate	Power set	Peak Output Power (dBm)	Limit (dBm)	RESULT
3	2422	MCS0	13.5	18.85	30.00	PASS
5	2432	MCS0	20	25.92	30.00	PASS
6	2437	MCS0	20	25.84	30.00	PASS
7	2442	MCS0	20	25.89	30.00	PASS
9	2452	MCS0	13.5	18.53	30.00	PASS
802.1°	1n_HT_40	M Ch0				
	Freq.	Data	Power	Max. Avg. Output include tune up	Limit	
СН	(MHz)	Rate	set	tolerance Power	(dBm)	RESULT
				(dBm)		
3	2422	MCS0	13.5	12.86	30.00	PASS
5	2432	MCS0	20	19.84	30.00	PASS
6	2437	MCS0	20	19.74	30.00	PASS
7	2442	MCS0	20	19.82	30.00	PASS
9	2452	MCS0	13.5	12.75	30.00	PASS

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802.1°	 1n_HT_40M	Ch1				
СН	Freq. (MHz)	Data Rate	Power set	Peak Output Power (dBm)	Limit (dBm)	RESULT
3	2422	MCS0	13.5	18.39	30.00	PASS
5	2432	MCS0	20.5	25.81	30.00	PASS
6	2437	MCS0	20.5	25.61	30.00	PASS
7	2442	MCS0	20.5	25.73	30.00	PASS
9	2452	MCS0	13.5	18.49	30.00	PASS
802.1°	1n_HT_40M	Ch1				•
				Max. Avg. Output		
СН	Freq.	Data	Power	include tune up	Limit	RESULT
СП	(MHz)	Rate	set	tolerance Power	(dBm)	KESULI
				(dBm)		
3	2422	MCS0	13.5	12.58	30.00	PASS
5	2432	MCS0	20.5	19.81	30.00	PASS
6	2437	MCS0	20.5	19.55	30.00	PASS
7	2442	MCS0	20.5	19.61	30.00	PASS
9	2452	MCS0	13.5	12.54	30.00	PASS

802.1°	1n_HT40N	<b>Л_2</b> ТХ						
СН	Freq. (MHz)	•	Power		Output wer	Total Peak Output Power	Limit (dBm)	RESULT
	(141112)	Nate	361	Ch0	Ch1	(dBm)	(dbiii)	
3	2422	MCS0	13.5	18.89	18.93	21.92	30.00	PASS
5	2432	MCS0	18	24.85	24.39	27.64	30.00	PASS
6	2437	MCS0	19	25.73	25.18	28.47	30.00	PASS
7	2442	MCS0	20.5	26.10	25.98	29.05	30.00	PASS
9	2452	MCS0	13.5	18.79	18.82	21.82	30.00	PASS
802.1°	1n_HT40N	M_2TX						•
				Avg. C	Output	Max. Avg. Output		
СН	Freq.	Data	Power	Po	wer	include tune up	Limit	RESULT
	(MHz)	Rate	set	(dBm)		tolerance Power	(dBm)	KLSOLI
				Ch0	Ch1	(dBm)		
3	2422	MCS0	13.5	12.93	12.80	15.88	30.00	PASS
5	2432	MCS0	18	18.25	17.68	20.98	30.00	PASS
6	2437	MCS0	19	19.25	18.49	21.90	30.00	PASS
7	2442	MCS0	20.5	20.00	19.82	22.92	30.00	PASS
9	2452	MCS0	13.5	13.18	12.74	15.98	30.00	PASS

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CH	802.1°	1ax_HE_2	OM ChO					
A		Freq.	Data	RU Config		Power		RESULT
CH	1	2412	MCS0	full	16	21.61	30.00	PASS
8	4	2427	MCS0	full	20.5	26.82	30.00	PASS
11	6	2437	MCS0	full	21	26.62	30.00	PASS
Result   R	8	2447	MCS0	full	21	26.99	30.00	PASS
CH	11	2462	MCS0	full	16	21.72	30.00	PASS
CH (MHz)         Freq. (MHz)         Data (MHz)         RU Config         Power set         include tune up tolerance Power (dBm)         Limit (dBm)         RESULT           1         2412         MCS0         full         16         14.83         30.00         PASS           4         2427         MCS0         full         20.5         19.93         30.00         PASS           6         2437         MCS0         full         21         19.77         30.00         PASS           8         2447         MCS0         full         21         19.98         30.00         PASS           802.11ax_HE_20M Ch1         Power set         Chaban (dBm)         Limit (dBm)         RESULT           1         2412         MCS0         full         16         21.35         30.00         PASS           4         2427         MCS0         full         21         26.54         30.00         PASS           8         2447         MCS0         full         21.5         26.09         30.00         PASS           8         2447         MCS0         full         16.5         21.39         30.00         PASS           Freq. Data (MHz)	802.1	1ax_HE_2	0M Ch0					•
A	СН	•		RU Config		include tune up tolerance Power	_	RESULT
6         2437         MCS0         full         21         19.77         30.00         PASS           8         2447         MCS0         full         21         19.98         30.00         PASS           11         2462         MCS0         full         16         14.73         30.00         PASS           802.11ax_HE_20M Ch1           Power (MHz)         Peak Output Power (dBm)         Limit (dBm)         RESULT (dBm)           1         2412         MCS0         full         21         26.54         30.00         PASS           4         2427         MCS0         full         21.5         26.09         30.00         PASS           8         2447         MCS0         full         21.5         26.41         30.00         PASS           802.11ax_HE_20M Ch1         Power (dBm)         Limit (dBm)         RESULT           CH         Freq. (MHz)         Data (RU Config)         Power (dBm)         Limit (dBm)         RESULT           CH         Freq. (MHz)         Max. Avg. Output (dBm)         Limit (dBm)         RESULT	1	2412	MCS0	full	16	14.83	30.00	PASS
8         2447         MCS0         full         21         19.98         30.00         PASS           11         2462         MCS0         full         16         14.73         30.00         PASS           802.11ax_HE_20M Ch1           Peak Output Power (dBm)         Limit (dBm)         RESULT           1         2412         MCS0         full         16         21.35         30.00         PASS           4         2427         MCS0         full         21         26.54         30.00         PASS           6         2437         MCS0         full         21.5         26.09         30.00         PASS           8         2447         MCS0         full         21.5         26.41         30.00         PASS           802.11ax_HE_20M Ch1         Power (MHz)         Max. Avg. Output include tune up tolerance Power (dBm)         Limit (dBm)         RESULT           CH         Freq. (MHz)         Data Rate         RU Config         Power set         Include tune up tolerance Power (dBm)         Limit (dBm)         RESULT           CH         Freq. (MHz)         Data Rate         RU Config         Power Set         Include tune up tolerance Power (dBm)         RESULT	4	2427	MCS0	full	20.5	19.93	30.00	PASS
The color of the	6	2437	MCS0	full	21	19.77	30.00	PASS
Result   R	8	2447	MCS0	full	21	19.98	30.00	PASS
CH         Freq. (MHz)         Data Rate         RU Config         Power set         Peak Output (dBm)         Limit (dBm)         RESULT           1         2412         MCS0         full         16         21.35         30.00         PASS           4         2427         MCS0         full         21         26.54         30.00         PASS           6         2437         MCS0         full         21.5         26.09         30.00         PASS           8         2447         MCS0         full         21.5         26.41         30.00         PASS           11         2462         MCS0         full         16.5         21.39         30.00         PASS           802.11ax_HE_20M Ch1         CH         Power set         Max. Avg. Output include tune up tolerance Power (dBm)         RESULT (dBm)           1         2412         MCS0         full         16         14.61         30.00         PASS           4         2427         MCS0         full         21         19.72         30.00         PASS           6         2437         MCS0         full         21.5         19.67         30.00         PASS	11	2462	MCS0	full	16	14.73	30.00	PASS
CH         Freq. (MHz)         Data Rate         RU Config         Power set         Peak Output (dBm)         Limit (dBm)         RESULT           1         2412         MCS0         full         16         21.35         30.00         PASS           4         2427         MCS0         full         21         26.54         30.00         PASS           6         2437         MCS0         full         21.5         26.09         30.00         PASS           8         2447         MCS0         full         21.5         26.41         30.00         PASS           11         2462         MCS0         full         16.5         21.39         30.00         PASS           802.11ax_HE_20M Ch1         CH         Power set         Max. Avg. Output include tune up tolerance Power (dBm)         RESULT (dBm)           1         2412         MCS0         full         16         14.61         30.00         PASS           4         2427         MCS0         full         21         19.72         30.00         PASS           6         2437         MCS0         full         21.5         19.67         30.00         PASS	802.1	1ax HE 2	20M Ch1					
1         2412         MCS0         full         16         21.35         30.00         PASS           4         2427         MCS0         full         21         26.54         30.00         PASS           6         2437         MCS0         full         21.5         26.09         30.00         PASS           8         2447         MCS0         full         21.5         26.41         30.00         PASS           11         2462         MCS0         full         16.5         21.39         30.00         PASS           802.11ax_HE_20M Ch1         CH         Freq. (MHz)         Power (dBm)         Max. Avg. Output include tune up tolerance Power (dBm)         RESULT (dBm)           1         2412         MCS0         full         16         14.61         30.00         PASS           4         2427         MCS0         full         21         19.72         30.00         PASS           6         2437         MCS0         full         21.5         19.67         30.00         PASS           8         2447         MCS0         full         21.5         19.87         30.00         PASS		Freq.	Data	RU Config		Power		RESULT
4         2427         MCS0         full         21         26.54         30.00         PASS           6         2437         MCS0         full         21.5         26.09         30.00         PASS           8         2447         MCS0         full         21.5         26.41         30.00         PASS           11         2462         MCS0         full         16.5         21.39         30.00         PASS           802.11ax_HE_20M Ch1           CH         Freq. (MHz)         Data Rate         RU Config         Power set         Max. Avg. Output include tune up tolerance Power (dBm)         Limit (dBm)         RESULT           1         2412         MCS0         full         16         14.61         30.00         PASS           4         2427         MCS0         full         21         19.72         30.00         PASS           6         2437         MCS0         full         21.5         19.67         30.00         PASS           8         2447         MCS0         full         21.5         19.87         30.00         PASS	1	2412	MCS0	full	16	` '	30.00	PASS
6         2437         MCS0         full         21.5         26.09         30.00         PASS           8         2447         MCS0         full         21.5         26.41         30.00         PASS           11         2462         MCS0         full         16.5         21.39         30.00         PASS           802.11ax_HE_20M Ch1           Max. Avg. Output include tune up tolerance Power (dBm)         Limit (dBm)         RESULT           1         2412         MCS0         full         16         14.61         30.00         PASS           4         2427         MCS0         full         21         19.72         30.00         PASS           6         2437         MCS0         full         21.5         19.67         30.00         PASS           8         2447         MCS0         full         21.5         19.87         30.00         PASS	4	2427	MCS0	full	21			PASS
8         2447         MCS0         full         21.5         26.41         30.00         PASS           11         2462         MCS0         full         16.5         21.39         30.00         PASS           802.11ax_HE_20M Ch1           CH         Freq. (MHz)         Data (MHz)         RU Config         Max. Avg. Output include tune up (dBm)         Limit (dBm)           1         2412         MCS0         full         16         14.61         30.00         PASS           4         2427         MCS0         full         21         19.72         30.00         PASS           6         2437         MCS0         full         21.5         19.67         30.00         PASS           8         2447         MCS0         full         21.5         19.87         30.00         PASS	6	2437		full	21.5			PASS
Ru Config   Power   Set   Se	8	2447	MCS0	full	21.5	26.41	30.00	PASS
CH         Freq. (MHz)         Data Rate         RU Config         Power set         Max. Avg. Output include tune up tolerance Power (dBm)         Limit (dBm)         RESULT           1         2412         MCS0         full         16         14.61         30.00         PASS           4         2427         MCS0         full         21         19.72         30.00         PASS           6         2437         MCS0         full         21.5         19.67         30.00         PASS           8         2447         MCS0         full         21.5         19.87         30.00         PASS	11	2462	MCS0	full	16.5	21.39	30.00	PASS
CH         Freq. (MHz)         Data Rate         RU Config         Power set         include tune up tolerance Power (dBm)         Limit (dBm)         RESULT           1         2412         MCS0         full         16         14.61         30.00         PASS           4         2427         MCS0         full         21         19.72         30.00         PASS           6         2437         MCS0         full         21.5         19.67         30.00         PASS           8         2447         MCS0         full         21.5         19.87         30.00         PASS	802.1	1ax_HE_2	20M Ch1					1
1     2412     MCS0     full     16     14.61     30.00     PASS       4     2427     MCS0     full     21     19.72     30.00     PASS       6     2437     MCS0     full     21.5     19.67     30.00     PASS       8     2447     MCS0     full     21.5     19.87     30.00     PASS	СН	-		RU Config		include tune up tolerance Power		RESULT
4     2427     MCS0     full     21     19.72     30.00     PASS       6     2437     MCS0     full     21.5     19.67     30.00     PASS       8     2447     MCS0     full     21.5     19.87     30.00     PASS	1	2412	MCS0	full	16		30.00	PASS
6         2437         MCS0         full         21.5         19.67         30.00         PASS           8         2447         MCS0         full         21.5         19.87         30.00         PASS								
8 2447 MCS0 full 21.5 19.87 30.00 PASS								
	_							
			MCS0					PASS

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802.1	lax_HE20	M_2TX							
СН	Freq.	Data Rate	RU Config	Power		Output wer	Total Peak Output Power	Limit	RESULT
	(MHz)	Kale		set	Ch0	Ch1	(dBm)	(dBm)	
1	2412	MCS0	full	16	21.98	21.39	24.71	30.00	PASS
4	2427	MCS0	full	21	26.93	26.76	29.86	30.00	PASS
6	2437	MCS0	full	21	26.79	26.39	29.60	30.00	PASS
8	2447	MCS0	full	21	27.01	26.54	29.79	30.00	PASS
11	2462	MCS0	full	16.5	21.86	21.44	24.67	30.00	PASS
802.1°	lax_HE20	M_2TX				-			•
					Avg. C	Output	Max. Avg. Output		
СН	Freq.	Data	RU Config	Power	Po	wer	include tune up	Limit	RESULT
	(MHz)	Rate	Ko coming	set	(dE	Bm)	tolerance Power	(dBm)	KLOULI
					Ch0	Ch1	(dBm)		
1	2412	MCS0	full	16	15.17	14.73	17.97	30.00	PASS
4	2427	MCS0	full	21	20.11	19.76	22.95	30.00	PASS
6	2437	MCS0	full	21	20.00	19.69	22.86	30.00	PASS
8	2447	MCS0	full	21	20.06	19.90	22.99	30.00	PASS
11	2462	MCS0	full	16.5	15.01	14.84	17.94	30.00	PASS

802.1	1ax_HE_4	IOM Ch0					
СН	Freq. (MHz)	Data Rate	RU Config	Power set	Peak Output Power (dBm)	Limit (dBm)	RESULT
3	2422	MCS0	full	14	19.67	30.00	PASS
5	2432	MCS0	full	20.5	26.72	30.00	PASS
6	2437	MCS0	full	20.5	26.63	30.00	PASS
7	2442	MCS0	full	20.5	26.68	30.00	PASS
9	2452	MCS0	full	14	19.46	30.00	PASS
802.1°	1ax_HE_4	IOM ChO					
СН	Freq. (MHz)	Data Rate	RU Config	Power set	Max. Avg. Output include tune up tolerance Power	Limit (dBm)	RESULT
					(dBm)		
3	2422	MCS0	full	14	12.91	30.00	PASS
5	2432	MCS0	full	20.5	19.85	30.00	PASS
6	2437	MCS0	full	20.5	19.84	30.00	PASS
7	2442	MCS0	full	20.5	19.99	30.00	PASS
9	2452	MCS0	full	14	12.96	30.00	PASS

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802.1	1ax_HE_4	IOM Ch1					
СН	Freq. (MHz)	Data Rate	RU Config	Power set	Peak Output Power (dBm)	Limit (dBm)	RESULT
3	2422	MCS0	full	14	11.68	30.00	PASS
5	2432	MCS0	full	21	26.52	30.00	PASS
6	2437	MCS0	full	21	26.48	30.00	PASS
7	2442	MCS0	full	21	26.62	30.00	PASS
9	2452	MCS0	full	14	19.40	30.00	PASS
802.1	1ax_HE_4	OM Ch1		•			•
СН	Freq.	Data Rate	RU Config	Power set	Max. Avg. Output include tune up tolerance Power	Limit (dBm)	RESULT
					(dBm)		
3	2422	MCS0	full	14	12.58	30.00	PASS
5	2432	MCS0	full	21	19.57	30.00	PASS
6	2437	MCS0	full	21	19.52	30.00	PASS
7	2442	MCS0	full	21	19.69	30.00	PASS
9	2452	MCS0	full	14	12.73	30.00	PASS

802.1	1ax_HE40	M_2TX							
СН	Freq.	Data Rate	RU Config	Power set		Output wer	Total Peak Output Power	Limit (dBm)	RESULT
	(IVII 12)	Nate		361	Ch0	Ch1	(dBm)	(dbiii)	
3	2422	MCS0	full	13.5	18.93	18.82	21.89	30.00	PASS
5	2432	MCS0	full	18.5	25.05	24.71	27.89	30.00	PASS
6	2437	MCS0	full	19	25.62	25.11	28.38	30.00	PASS
7	2442	MCS0	full	20.5	26.61	26.49	29.56	30.00	PASS
9	2452	MCS0	full	13.5	18.83	18.76	21.81	30.00	PASS
802.1°	1ax_HE40	M_2TX							
					Avg. C	Output	Max. Avg. Output		
СН	Freq.	Data	RU Config	Power	Pov	wer	include tune up	Limit	RESULT
"	(MHz)	Rate	ito oomig	set	(dE	Bm)	tolerance Power	(dBm)	I KLOOL I
					Ch0	Ch1	(dBm)		
3	2422	MCS0	full	13.5	13.08	12.73	15.92	30.00	PASS
5	2432	MCS0	full	18.5	18.23	17.85	21.05	30.00	PASS
6	2437	MCS0	full	19	18.79	18.09	21.46	30.00	PASS
7	2442	MCS0	full	20.5	19.62	19.28	22.46	30.00	PASS
9	2452	MCS0	full	13.5	13.04	12.67	15.87	30.00	PASS

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802.11	b Ch0						
СН	Freq. (MHz)	Data Rate	Avg. Output Power (dBm)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	RESULT
1	2412	1	17.68	1.20	18.88	36	PASS
4	2427	1	19.78	1.20	20.98	36	PASS
6	2437	1	19.63	1.20	20.83	36	PASS
8	2447	1	19.75	1.20	20.95	36	PASS
11	2462	1	17.95	1.20	19.15	36	PASS

802.11	b Ch1						
СН	Freq. (MHz)	Data Rate	Avg. Output Power (dBm)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	RESULT
1	2412	1	17.61	1.20	18.81	36	PASS
4	2427	1	19.68	1.20	20.88	36	PASS
6	2437	1	19.54	1.20	20.74	36	PASS
8	2447	1	19.56	1.20	20.76	36	PASS
11	2462	1	17.85	1.20	19.05	36	PASS

802.11	b_2TX								
СН	Freq. (MHz)	Data Rate		Output wer	Total Avg. Output Power	Antenna Gain	EIRP (dBm)	Limit (dBm)	RESULT
	(141112)	Nate	Ch0	Ch1	(dBm)	(dBi)	(abiii)	(abiii)	
1	2412	1	18.04	17.89	20.97	4.21	25.18	36	PASS
4	2427	1	20.03	19.89	22.97	4.21	27.18	36	PASS
6	2437	1	19.81	19.67	22.75	4.21	26.96	36	PASS
8	2447	1	19.88	19.75	22.82	4.21	27.03	36	PASS
11	2462	1	17.98	17.97	20.98	4.21	25.19	36	PASS

802.11	802.11g Ch0											
СН	Freq. (MHz)	Data Rate	Avg. Output Power (dBm)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	RESULT					
1	2412	6	14.78	1.20	15.98	36	PASS					
4	2427	6	19.98	1.20	21.18	36	PASS					
6	2437	6	19.85	1.20	21.05	36	PASS					
8	2447	6	19.96	1.20	21.16	36	PASS					
11	2462	6	14.82	1.20	16.02	36	PASS					

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802.11	lg Ch1						
СН	Freq. (MHz)	Data Rate	Avg. Output Power (dBm)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	RESULT
1	2412	6	14.61	1.20	15.81	36	PASS
4	2427	6	19.65	1.20	20.85	36	PASS
6	2437	6	19.52	1.20	20.72	36	PASS
8	2447	6	19.56	1.20	20.76	36	PASS
11	2462	6	14.55	1.20	15.75	36	PASS

802.11	g_2TX								
СН	Freq. (MHz)	Data Rate	_	Output wer	Total Avg. Output Power	Antenna Gain	EIRP (dBm)	Limit (dBm)	RESULT
	(141112)	Nate	Ch0	Ch1	(dBm)	(dBi)	(abiii)	(ubiii)	
1	2412	6	14.79	14.66	17.74	4.21	21.95	36	PASS
4	2427	6	19.99	19.85	22.93	4.21	27.14	36	PASS
6	2437	6	19.88	19.55	22.73	4.21	26.94	36	PASS
8	2447	6	19.98	19.59	22.80	4.21	27.01	36	PASS
11	2462	6	14.88	14.58	17.75	4.21	21.96	36	PASS

802.11	ln_HT_20	M Ch0					
СН	Freq. (MHz)	Data Rate	Avg. Output Power (dBm)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	RESULT
1	2412	MCS0	14.98	1.20	16.18	36	PASS
4	2427	MCS0	19.98	1.20	21.18	36	PASS
6	2437	MCS0	19.96	1.20	21.16	36	PASS
8	2447	MCS0	19.97	1.20	21.17	36	PASS
11	2462	MCS0	14.71	1.20	15.91	36	PASS

802.11n_HT_20M Ch1							
СН	Freq. (MHz)	Data Rate	Avg. Output Power (dBm)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	RESULT
1	2412	MCS0	14.67	1.20	15.87	36	PASS
4	2427	MCS0	19.91	1.20	21.11	36	PASS
6	2437	MCS0	19.54	1.20	20.74	36	PASS
8	2447	MCS0	19.67	1.20	20.87	36	PASS
11	2462	MCS0	14.51	1.20	15.71	36	PASS

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802.11	n_HT20N	1_2TX							
СН	Freq.	Data Rate	1	Output wer	Total Avg. Output Power	Antenna Gain	EIRP (dBm)	Limit (dBm)	RESULT
	(141112)	Nate	Ch0	Ch1	(dBm)	(dBi)	(ubiii)	(ubiii)	
1	2412	MCS0	15.00	14.81	17.91	4.21	22.12	36	PASS
4	2427	MCS0	20.00	19.94	22.98	4.21	27.19	36	PASS
6	2437	MCS0	20.02	19.55	22.80	4.21	27.01	36	PASS
8	2447	MCS0	20.03	19.84	22.94	4.21	27.15	36	PASS
11	2462	MCS0	15.09	14.74	17.93	4.21	22.14	36	PASS

802.11	ln_HT_40	M Ch0					
СН	Freq. (MHz)	Data Rate	Avg. Output Power (dBm)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	RESULT
3	2422	MCS0	12.86	1.20	14.06	36	PASS
5	2432	MCS0	19.84	1.20	21.04	36	PASS
6	2437	MCS0	19.74	1.20	20.94	36	PASS
7	2442	MCS0	19.82	1.20	21.02	36	PASS
9	2452	MCS0	12.75	1.20	13.95	36	PASS

802.11	In_HT_40	M Ch1					
СН	Freq. (MHz)	Data Rate	Avg. Output Power (dBm)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	RESULT
3	2422	MCS0	12.58	1.20	13.78	36	PASS
5	2432	MCS0	19.81	1.20	21.01	36	PASS
6	2437	MCS0	19.55	1.20	20.75	36	PASS
7	2442	MCS0	19.61	1.20	20.81	36	PASS
9	2452	MCS0	12.54	1.20	13.74	36	PASS

802.11	n_HT40M	I_2TX							
СН	Freq. (MHz)	Data Rate	_	Output wer	Total Avg. Output Power	Antenna Gain	EIRP (dBm)	Limit (dBm)	RESULT
	(11112)	Nuto	Ch0	Ch1	(dBm)	(dBi)	(uBiii)	(aBiii)	
3	2422	MCS0	12.93	12.80	15.88	4.21	20.09	36	PASS
5	2432	MCS0	18.25	17.68	20.98	4.21	25.19	36	PASS
6	2437	MCS0	19.25	18.49	21.90	4.21	26.11	36	PASS
7	2442	MCS0	20.00	19.82	22.92	4.21	27.13	36	PASS
9	2452	MCS0	13.18	12.74	15.98	4.21	20.19	36	PASS

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802.11	802.11ax_HE_20M Ch0											
СН	Freq. (MHz)	Data Rate	RU Config	Avg. Output Power (dBm)	Antenna Gain (dBi)	EIRP (dBm)	Limit	RESULT				
1	2412	MCS0	full	14.83	1.20	16.03	36	PASS				
4	2427	MCS0	full	19.93	1.20	21.13	36	PASS				
6	2437	MCS0	full	19.77	1.20	20.97	36	PASS				
8	2447	MCS0	full	19.98	1.20	21.18	36	PASS				
11	2462	MCS0	full	14.73	1.20	15.93	36	PASS				

802.11	802.11ax_HE_20M Ch1											
СН	Freq. (MHz)	Data Rate	RU Config	Avg. Output Power (dBm)	Antenna Gain (dBi)	EIRP (dBm)	Limit	RESULT				
1	2412	MCS0	full	14.61	1.20	15.81	36	PASS				
4	2427	MCS0	full	19.72	1.20	20.92	36	PASS				
6	2437	MCS0	full	19.67	1.20	20.87	36	PASS				
8	2447	MCS0	full	19.87	1.20	21.07	36	PASS				
11	2462	MCS0	full	14.65	1.20	15.85	36	PASS				

802.11	802.11ax_HE20M_2TX											
СН	Freq. (MHz)	Data Rate	RU Config		Output wer	Total Avg. Output Power	Antenna Gain	EIRP (dBm)	Limit	RESULT		
	(11112)	Rate		Ch0	Ch1	(dBm)	(dBi)	(abiii)				
1	2412	MCS0	full	15.17	14.73	17.97	4.21	22.18	36	PASS		
4	2427	MCS0	full	20.11	19.76	22.95	4.21	27.16	36	PASS		
6	2437	MCS0	full	20.00	19.69	22.86	4.21	27.07	36	PASS		
8	2447	MCS0	full	20.06	19.90	22.99	4.21	27.20	36	PASS		
11	2462	MCS0	full	15.01	14.84	17.94	4.21	22.15	36	PASS		

802.11	lax_HE_4	OM ChO						
СН	Freq. (MHz)	Data Rate	RU Config	Avg. Output Power (dBm)	Antenna Gain (dBi)	EIRP (dBm)	Limit	RESULT
3	2422	MCS0	full	12.91	1.20	14.11	36	PASS
5	2432	MCS0	full	19.85	1.20	21.05	36	PASS
6	2437	MCS0	full	19.84	1.20	21.04	36	PASS
7	2442	MCS0	full	19.99	1.20	21.19	36	PASS
9	2452	MCS0	full	12.96	1.20	14.16	36	PASS

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802.11	ax_HE_4	0M Ch1						
СН	Freq. (MHz)	Data Rate	RU Config	Avg. Output Power (dBm)	Antenna Gain (dBi)	EIRP (dBm)	Limit	RESULT
3	2422	MCS0	full	12.58	1.20	13.78	36	PASS
5	2432	MCS0	full	19.57	1.20	20.77	36	PASS
6	2437	MCS0	full	19.52	1.20	20.72	36	PASS
7	2442	MCS0	full	19.69	1.20	20.89	36	PASS
9	2452	MCS0	full	12.73	1.20	13.93	36	PASS

802.11	ax_HE40l	M_2TX								
СН	Freq.	Data Rate	RU Config	1	Output wer	Total Avg. Output Power	Antenna Gain	EIRP (dBm)	Limit	RESULT
	(141112)	Rate		Ch0	Ch1	(dBm)	(dBi)	(abiii)		
3	2422	MCS0	full	13.08	12.73	15.92	4.21	20.13	36	PASS
5	2432	MCS0	full	18.23	17.85	21.05	4.21	25.26	36	PASS
6	2437	MCS0	full	18.79	18.09	21.46	4.21	25.67	36	PASS
7	2442	MCS0	full	19.62	19.28	22.46	4.21	26.67	36	PASS
9	2452	MCS0	full	13.04	12.67	15.87	4.21	20.08	36	PASS

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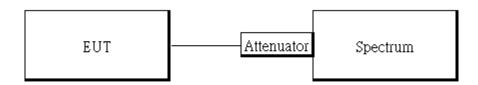
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## **EMISSION BANDWIDTH MEASUREMENT**

#### 9.1 Standard Applicable

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

#### 9.2 **Test Setup**



#### 9.3 **Measurement Procedure:**

- 1. Place the EUT on the table and set it in transmitting mode.
- 2. Remove the antenna from the EUT and then connect a low loss RF cable from the antenna port to the spectrum analyzer.

#### 9.3.1 **FCC** measurements

- 1. The testing follows the Measurement Procedure of the KDB 558074 D01.
- Set the spectrum analyzer as

RBW= 100 kHz,

VBW = 3 X RBW

Span= 2 to 5 times of the OBW,

Sweep=auto, Detector = Peak, and Max hold.

- 3. Mark the upper and lower frequencies of -6dB.
- 4. Repeat above procedures until all test default channel is completed.

#### 9.3.2 **ISED** measurements

- 1. The testing follows the Measurement Procedure of the RSS-Gen section 6.7.
- 2. Set the spectrum analyzer as

RBW= 1 % to 5% of 99% and -6dB Bandwidth,

VBW ≥ 3 X RBW.

Span= large enough to capture all products of the modulation process Sweep=auto, Detector = Peak, and Max hold.

- 3. Mark the upper and lower frequencies of 99% and -6dB.
- 4. Repeat above procedures until all test default channel is completed.

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### 6dB Bandwidth

## 802.11b Ch0

Freq. (MHz)	6dB BW (kHz)	Limit (kHz)	Result
2412	7596.00	≥ 500	PASS
2437	8050.00	≥ 500	PASS
2462	7585.00	≥ 500	PASS

### 802.11b Ch1

Freq. (MHz)	6dB BW (kHz)	Limit (kHz)	Result
2412	7193.00	≥ 500	PASS
2437	7119.00	≥ 500	PASS
2462	7143.00	≥ 500	PASS

# 802.11g Ch0

Freq. (MHz)	6dB BW (kHz)	Limit (kHz)	Result
2412	15480.00	≥ 500	PASS
2437	15180.00	≥ 500	PASS
2462	15390.00	≥ 500	PASS

# 802.11g Ch1

Freq. (MHz)	6dB BW (kHz)	Limit (kHz)	Result
2412	16030.00	≥ 500	PASS
2437	15700.00	≥ 500	PASS
2462	15760.00	≥ 500	PASS

## 802.11n HT 20M Ch0

Freq. (MHz)	6dB BW (kHz)	Limit (kHz)	Result
2412	15980.00	≥ 500	PASS
2437	16000.00	≥ 500	PASS
2462	15910.00	≥ 500	PASS

# 802.11n\_HT\_20M Ch1

Freq. (MHz)	6dB BW (kHz)	Limit (kHz)	Result
2412	16820.00	≥ 500	PASS
2437	15970.00	≥ 500	PASS
2462	16560.00	≥ 500	PASS

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### 802.11n HT 40M Ch0

<u> </u>				
Freq.	6dB BW	Limit	Result	
(MHz)	(kHz)	(kHz)	Result	
2422	35340.00	≥ 500	PASS	
2437	35170.00	≥ 500	PASS	
2452	36000.00	≥ 500	PASS	

# 802.11n\_HT\_40M Ch1

Freq. (MHz)	6dB BW (kHz)	Limit (kHz)	Result
2422	36310.00	≥ 500	PASS
2437	35130.00	≥ 500	PASS
2452	35710.00	≥ 500	PASS

# 802.11ax\_HE\_20M Ch0

	Freq. (MHz)	RU Config	6dB BW (kHz)	Limit (kHz)	Result
	2412	full	17830.00	≥ 500	PASS
	2437	full	18050.00	≥ 500	PASS
Ī	2462	full	18580.00	≥ 500	PASS

# 802.11ax\_HE\_20M Ch1

Freq. (MHz)	RU Config	6dB BW (kHz)	Limit (kHz)	Result
2412	full	18160.00	≥ 500	PASS
2437	full	18450.00	≥ 500	PASS
2462	full	18410.00	≥ 500	PASS

## 802.11ax HE 40M Ch0

Freq. (MHz)	RU Config	6dB BW (kHz)	Limit (kHz)	Result
2422	full	37210.00	≥ 500	PASS
2437	full	37570.00	≥ 500	PASS
2452	full	37810.00	≥ 500	PASS

## 802.11ax HE 40M Ch1

	Freq. (MHz)	RU Config	6dB BW (kHz)	Limit (kHz)	Result
	2422	full	37760.00	≥ 500	PASS
ĺ	2437	full	37160.00	≥ 500	PASS
I	2452	full	36400.00	≥ 500	PASS

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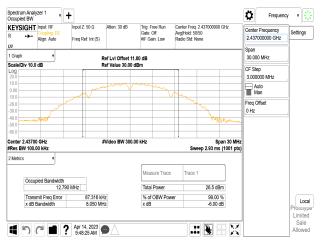


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#### 802.11b 20MHz Chain0 2412MHz



802.11b 20MHz Chain0 2437MHz



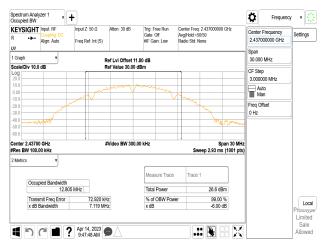
802.11b\_20MHz\_Chain0\_2462MHz



802.11b 20MHz Chain1 2412MHz



802.11b\_20MHz\_Chain1\_2437MHz



802.11b\_20MHz\_Chain1\_2462MHz



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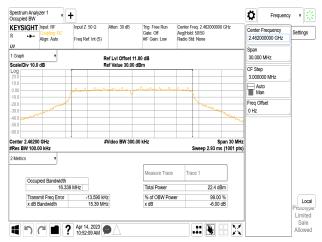
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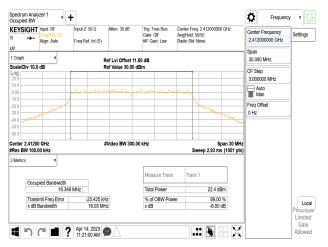
802.11g 20MHz Chain0 2437MHz



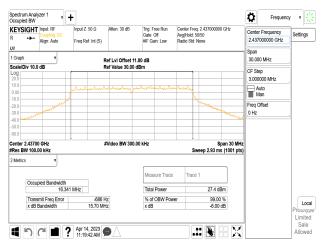
802.11g\_20MHz\_Chain0\_2462MHz



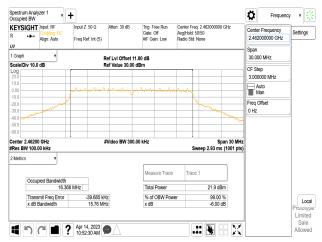
802.11g\_20MHz\_Chain1\_2412MHz



802.11g\_20MHz\_Chain1\_2437MHz



 $802.11g\_20MHz\_Chain1\_2462MHz$ 



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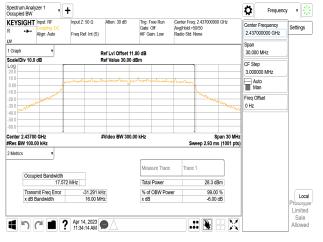


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#### 802.11n 20MHz Chain0 2412MHz



802.11n 20MHz Chain0 2437MHz



802.11n\_20MHz\_Chain0\_2462MHz



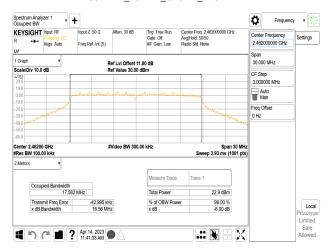
802.11n 20MHz Chain1 2412MHz



802.11n\_20MHz\_Chain1\_2437MHz



802.11n\_20MHz\_Chain1\_2462MHz



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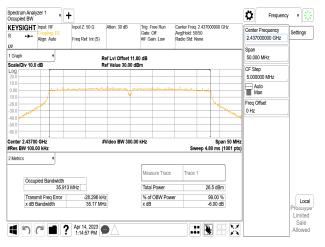


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#### 802.11n 40MHz Chain0 2422MHz



802.11n 40MHz Chain0 2437MHz



802.11n\_40MHz\_Chain0\_2452MHz



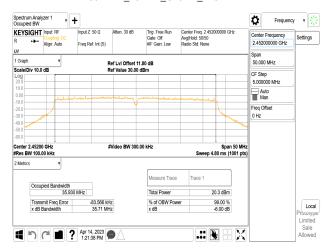
802.11n 40MHz Chain1 2422MHz



802.11n\_40MHz\_Chain1\_2437MHz



802.11n\_40MHz\_Chain1\_2452MHz



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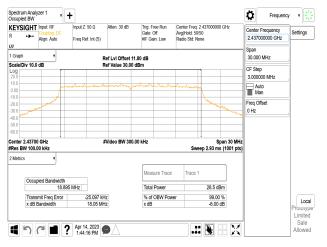


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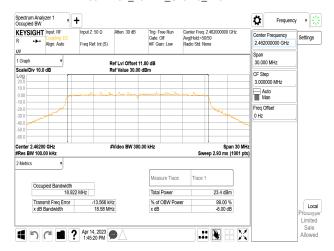
#### 802.11ax 20MHz Chain0 2412MHz



802.11ax 20MHz Chain0 2437MHz



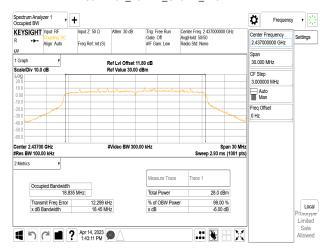
802.11ax\_20MHz\_Chain0\_2462MHz



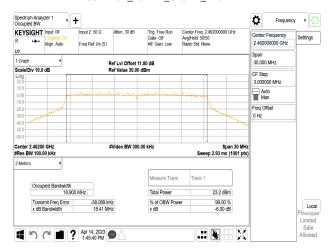
802.11ax 20MHz Chain1 2412MHz



802.11ax 20MHz Chain1 2437MHz



802.11ax\_20MHz\_Chain1\_2462MHz



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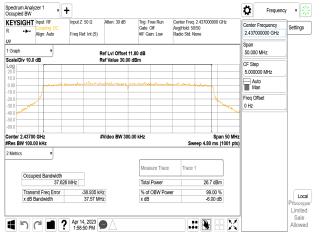


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#### 802.11ax 40MHz Chain0 2422MHz



802.11ax 40MHz Chain0 2437MHz



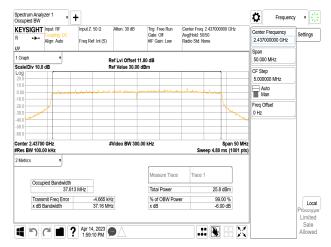
802.11ax\_40MHz\_Chain0\_2452MHz



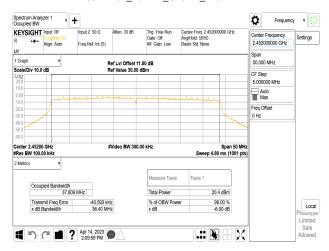
802.11ax 40MHz Chain1 2422MHz



802.11ax\_40MHz\_Chain1\_2437MHz



802.11ax\_40MHz\_Chain1\_2452MHz



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#### 99% Bandwidth 9.5

802.11b Ch0

### 802.11b Ch1

Freq. (MHz)	99% BW (MHz)	Freq. (MHz)	99% BW (MHz)
2412	12.947	2412	12.981
2437	12.932	2437	12.809
2462	12.945	2462	13.054

802.11a Ch0

# 802.11a Ch1

00 <u>2</u> 1119 0110		00 <u>2</u> g	
Freq.	99% BW	Freq.	99% BW
(MHz)	(MHz)	(MHz)	(MHz)
2412	16.433	2412	16.432
2437	16.405	2437	16.409
2462	16.436	2462	16.455

802.11n\_HT20M Ch0

## 802.11n\_HT20M Ch1

Freq. (MHz)	99% BW (MHz)	Freq. (MHz)	99% BW (MHz)
2412	17.634	2412	17.599
2437	17.624	2437	17.584
2462	17.633	2462	17.644

802.11n\_HT40M Ch0

# 802.11n\_HT40M Ch1

Freq.	99% BW	Freq.	99% BW
(MHz)	(MHz)	(MHz)	(MHz)
2422	36.008	2422	36.161
2437	36.026	2437	35.981
2452	36.154	2452	35.967

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# 802.11ax\_HE20M Ch0

# 802.11ax\_HE20M Ch1

Freq. (MHz)	RU Config	99% BW (MHz)	Freq. (MHz)	RU Config	99% BW (MHz)
2412	full	18.949	2412	full	18.904
2437	full	18.958	2437	full	18.861
2462	full	18.955	2462	full	18.952

## 802.11ax\_HE40M Ch0

## 802.11ax\_HE40M Ch1

Freq.	RU	99% BW	Freq.	RU	99% BW
(MHz)	Config	(MHz)	(MHz)	Config	(MHz)
2422	full	37.704	2422	full	37.751
2437	full	37.689	2437	full	37.618
2452	full	37.808	2452	full	37.609

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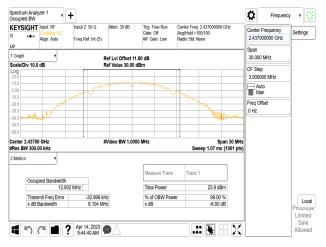


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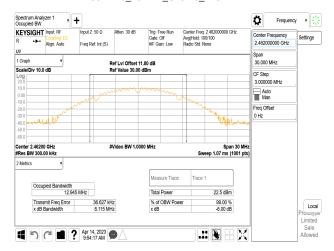
#### 802.11b 20MHz Chain0 2412MHz



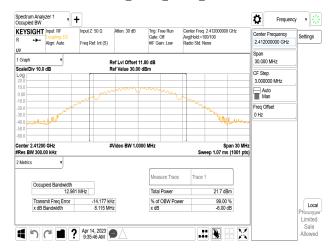
802.11b 20MHz Chain0 2437MHz



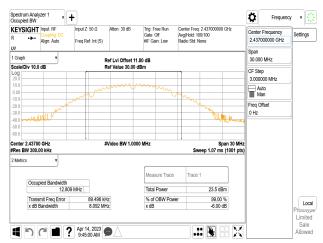
802.11b\_20MHz\_Chain0\_2462MHz



802.11b 20MHz Chain1 2412MHz



802.11b\_20MHz\_Chain1\_2437MHz



802.11b\_20MHz\_Chain1\_2462MHz



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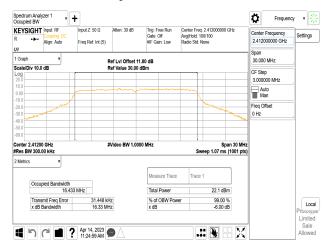
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### 802.11g\_20MHz\_Chain0\_2412MHz



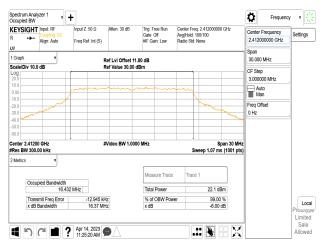
802.11g 20MHz Chain0 2437MHz



802.11g\_20MHz\_Chain0\_2462MHz



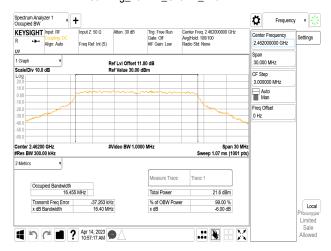
802.11g\_20MHz\_Chain1\_2412MHz



802.11g\_20MHz\_Chain1\_2437MHz



802.11g\_20MHz\_Chain1\_2462MHz



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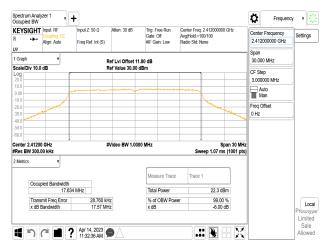
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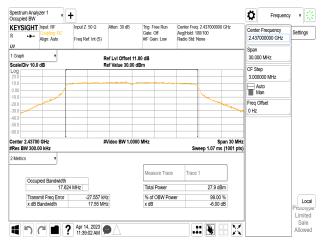


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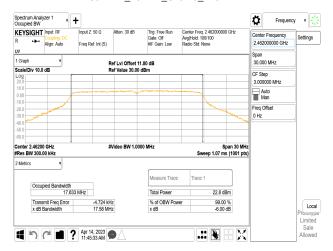
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802.11n 20MHz Chain0 2437MHz



802.11n\_20MHz\_Chain0\_2462MHz



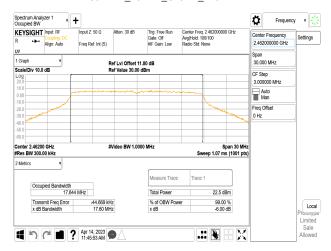
802.11n 20MHz Chain1 2412MHz



802.11n\_20MHz\_Chain1\_2437MHz



802.11n\_20MHz\_Chain1\_2462MHz



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