

FCC 47 CFR PART 15 SUBPART C CERTIFICATION TEST REPORT

For

2K Wireless Camera

MODEL NUMBER: W2KCB1

PROJECT NUMBER: 4788611066

REPORT NUMBER: 4788611066-1

FCC ID: SMHW2KCB1

IC: 4593A-W2KCB1

ISSUE DATE: Aug. 20, 2018

Prepared for

Circus World Displays Limited

Prepared by

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DATE: Aug. 20, 2018

Revision History

Rev.	Issue Date	Revisions	Revised By
	8/20/2018	Initial Issue	

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1. ATTESTATION OF TEST RESULTS

Applicant Information

Company Name: Circus World Displays Limited

Address: 4080 Montrose Rd., Niagara Falls, ON, L2H1J9, Canada

Manufacturer Information

Company Name: Circus World Displays Limited

Address: 4080 Montrose Rd., Niagara Falls, ON, L2H1J9, Canada

EUT Description

Product Name 2K Wireless Camera

Model Name W2KCB1
Sample Number 1733514
Data of Receipt Sample July 31, 2018

Date Tested Aug 1, 2018~ Aug. 19, 2018

APPLICABLE STANDARDS	
STANDARD	TEST RESULTS
CFR 47 Part 15 Subpart C	PASS
ISED RSS-GEN Issue 5	PASS
ISED RSS-247 Issue 2	PASS

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	Summary of Test Results					
Clause	Test Items	FCC/IC Rules	Test Results			
1	6db DTS Bandwidth and 99% Bandwidth	FCC 15.247 (a) (2) RSS-247 Clause 5.2 (a)	Complied			
2	Peak Conducted Power	FCC 15.247 (b) (3) RSS-247 Clause 5.4 (e)	Complied			
3	Power Spectral Density	FCC 15.247 (e) RSS-247 Clause 5.2 (b)	Complied			
4	Conducted Band edge And Spurious emission	FCC 15.247 (d) RSS-247 Clause 5.5	Complied			
5	Radiated Band edges and Spurious emission	FCC 15.247 (d) FCC 15.209 FCC 15.205 RSS-247 Clause 5.5 RSS-GEN Clause 8.9	Complied			
6	Conducted Emission Test For AC Power Port	FCC 15.207 RSS-GEN Clause 8.8	Complied			
7	Antenna Requirement	FCC 15.203 RSS-GEN Clause 8.3	Complied			

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Engineer Project Associate

Approved By:

Check By:

hemy les

Shawn Wen Laboratory Leader

Stephen Guo

Laboratory Manager

2. TEST METHODOLOGY

The tests documented in this report were performed in accordance with FCC KDB 558074 D01 DTS Meas Guidance v05, KDB414788 D01 Radiated Test Site v01r01, ANSI C63.10-2013, FCC CFR 47 Part 2, FCC CFR 47 Part 15, RSS-247 Issue 2, and RSS-GEN Issue5.

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3. FACILITIES AND ACCREDITATION

Test Location	UL Verification Services (Guangzhou) Co., Ltd. Song Shan Lake Branch.
Address	Building 10, Innovation Technology Park, Song Shan Lake Hi tech Development Zone, Dongguan, 523808, China
Accreditation Certificate	UL Verification Services (Guangzhou) Co., Ltd. Song Shan Lake Branch. EMC Laboratory has been accredited by A2LA for technical competence in the field of electrical testing, and proved to be in compliance with ISO/IEC 17025: 2005 General Requirements for the Competence of Testing and Calibration Laboratories and any additional program requirements in the identified field of testing. The Certificate Registration Number is 4102.01. UL Verification Services (Guangzhou) Co., Ltd. Song Shan Lake Branch. EMC Laboratory has been registered and fully described in a report filed with the FCC (Federal Communications Commission). The Designation Number is CN1187. UL Verification Services (Guangzhou) Co., Ltd. Song Shan Lake Branch. EMC Laboratory has been registered and fully described in a report filed with Industry Canada. The Company Number is 21320.

Note:

- All tests measurement facilities use to collect the measurement data are located at Building 10, Innovation Technology Park, Song Shan Lake Hi tech Development Zone, Dongguan, 523808, China
- The test anechoic chamber in UL Verification Services (Guangzhou) Co., Ltd.
 Song Shan Lake Branch had been calibrated and compared to the open field sites and
 the test anechoic chamber is shown to be equivalent to or worst case from the open field
 site.
- 3. For below 30MHz, lab had performed measurements at test anechoic chamber and comparing to measurements obtained on an open field site. And these measurements below 30MHz had been correlated to measurements performed on an OATS.

4. CALIBRATION AND UNCERTAINTY

4.1. MEASURING INSTRUMENT CALIBRATION

The measuring equipment utilized to perform the tests documented in this report has been calibrated in accordance with the manufacturer's recommendations, and is traceable to recognized national standards.

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4.2. MEASUREMENT UNCERTAINTY

Where relevant, the following measurement uncertainty levels have been estimated for tests performed on the apparatus:

Test Item	Uncertainty
Uncertainty for Conduction emission test	2.90dB
Uncertainty for Radiation Emission test(include Fundamental emission) (9kHz-30MHz)	2.2dB
Uncertainty for Radiation Emission test(include Fundamental emission) (30MHz-1GHz)	4.52dB
Uncertainty for Radiation Emission test	5.04dB(1-6GHz)
(1GHz to 26GHz)(include Fundamental	5.30dB (6GHz-18Gz)
emission)	5.23dB (18GHz-26Gz)

Note: This uncertainty represents an expanded uncertainty expressed at approximately the 95% confidence level using a coverage factor of k=2.

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5. EQUIPMENT UNDER TEST

5.1. DESCRIPTION OF EUT

Product Name:	2K Wireless Camera			
Model No.:	W2KCB1			
Operating Frequency:	IEEE 802.11B/g/n(HT20): 2412MHz to 2462MHz IEEE 802.11n(HT40): 2422MHz to 2452MHz			
Type of Modulation:	IEEE for 802.11B: DSSS (CCK, DQPSK, DBPSK) IEEE for 802.11G: OFDM (64QAM, 16QAM, QPSK, BPSK) IEEE for 802.11n (HT20 and HT40): OFDM (64QAM, 16QAM, QPSK, BPSK)			
Channel Number:	IEEE 802.11B/g, IEEE 802.11n(HT20): 11 Channels IEEE 802.11n(HT40): 7 Channels			
Channels Step:	Channels with 5MHz step			
Sample Type:	Fixed production			
Test power grade:	40 (manufacturer declare)			
Test software of EUT:	Secure CRT (ma	nufacturer declare)		
Antenna Type:	Folding Antenna			
Antenna Gain:	2 dBi			
Power Supply	Adapter	Model:ADS-12AM-12 12012EPCU INPUT:100-240V~50/60Hz Max.0.3A OUTPUT:12.0V === 1.0A		

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5.2. MAXIMUM OUTPUT POWER

Frequency Range (MHz)	Number of Transmit Chains(NTX)	IEE Std. 802.11	Channel Number	Max PK Conducted Power (dBm)
2412-2462	1	IEEE 802.11B	1-11[11]	18.42
2412-2462	1	IEEE 802.11G	1-11[11]	17.21
2412-2462	1	IEEE 802.11nHT20	1-11[11]	17.40
2422-2452	1	IEEE 802.11nHT40	3-9[7]	17.38

5.3. CHANNEL LIST

	Channel List for 802.11B/g/n (20 MHz)						
Channel	Frequency (MHz)	Channel	Frequenc y(MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)
1	2412	5	2432	9	2452		
2	2417	6	2437	10	2457		
3	2422	7	2442	11	2462		
4	2427	8	2447				

Channel List for 802.11n (40 MHz)							
Channel	Frequency (MHz)	Channel	Frequenc y(MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)
3	2422	5	2432	7	2442	9	2452
4	2427	6	2437	8	2447		

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5.4. TEST CHANNEL CONFIGURATION

Test Mode	Test Channel (MHz)
	LCH :CH01 2412
IEEE 802.11B	MCH: CH06 2437
	HCH: CH11 2462
	LCH :CH01 2412
IEEE 802.11G	MCH: CH06 2437
	HCH: CH11 2462
	LCH :CH01 2412
IEEE 802.11n HT20	MCH: CH06 2437
	HCH: CH11 2462
	LCH :CH03 2422
IEEE 802.11n HT40	MCH: CH06 2437
	HCH: CH09 2452

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5.5. THE WORSE CASE POWER SETTING PARAMETER

Tast Austana	Test Software Version	SecureCRT				
Test Antenna	Test Mode	Test Channel	Setting TX Power	Setting data rate (Mbps)		
		LCH	40	CCK_1Mbps		
	IEEE 802.11B	MCH	40	CCK_1Mbps		
		HCH	40	CCK_1Mbps		
	IEEE 802.11G	LCH	40	NO HT_6Mbps		
		MCH	40	NO HT_6Mbps		
Antenna 1		HCH	40	NO HT_6Mbps		
		LCH	40	HT20_MCS_0_20		
	IEEE 802.11n HT20	MCH	40	HT20_MCS_0_20		
		HCH	40	HT20_MCS_0_20		
		LCH	40	HT40+MCS_0_40		
	IEEE 802.11n HT40	MCH	40	HT40+MCS_0_40		
		HCH	40	HT40+MCS 0 40		

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5.6. DESCRIPTION OF AVAILABLE ANTENNAS

Ant.	Frequency (MHz)	Antenna Type	Antenna Gain (dBi)
1	2400-2483.5	Folding Antenna	2

Test Mode	Transmit and Receive Mode	Description
WIFI	⊠1TX, 1RX	The antennas can be used as transmitting/receiving antenna.



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5.7. **TEST ENVIRONMENT**

Environment Parameter	Selected Values During Tests		
Relative Humidity	55 ~ 65%		
Atmospheric Pressure:	1005Pa		
Temperature	TN	23 ~ 28°C	
	VL	N/A	
Voltage:	VN	DC 12.0V	
	VH	N/A	

Note: VL= Lower Extreme Test Voltage

VN= Nominal Voltage

VH= Upper Extreme Test Voltage TN= Normal Temperature

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5.8. DESCRIPTION OF TEST SETUP

SUPPORT EQUIPMENT

Item	Equipment	Brand Name	Model Name	FCC ID
1	Laptop	ThinkPad	T410	N/A

I/O PORT

Cable No	Port	Connector Type	Cable Type	Cable Length(m)	Remarks
1	LAN	LAN	N/A	N/A	N/A

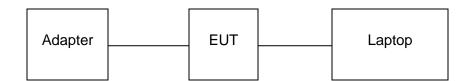
ACCESSORY

Item	Accessory	Brand Name	Model Name	Description
1	N/A	N/A	N/A	N/A

TEST SETUP

The EUT can work in an engineer mode with a software through a table PC.

SETUP DIAGRAM FOR TESTS



5.9. MEASURING INSTRUMENT AND SOFTWARE USED

5.9. MEASURING INSTRUMENT AND SOFTWARE USED								
		Conducted	l Emi	ssions(l	nstrur	ment)		
Used	Equipment	Manufacturer	Мо	del No.	Seri	ial No.	Last Cal.	Next Cal.
V	EMI Test Receiver	R&S	E	ESR3		1961	Dec.12, 2017	Dec.11, 2018
V	Two-Line V- Network	R&S	EI	NV216	10	1983	Dec.12, 2017	Dec.11, 2018
V	Artificial Mains Networks	Schwarzbeck	NSI	_K 8126	812	26465	Dec.12, 2017	Dec.11, 2018
			Sof	tware				
Used	Des	cription		Mai	nufac	turer	Name	Version
V	Test Software for C	Conducted distu	rbanc	e	UL		Antenna port	Ver. 7.2
		Radiated	Emis	sions(In	strum	ent)		
Used	Equipment	Manufacturer	Мо	del No.	Seri	ial No.	Last Cal.	Next Cal.
V	MXE EMI Receiver	KESIGHT	N:	9038A		56400 036	Dec. 12, 2017	Dec. 11, 2018
V	Hybrid Log Periodic Antenna	TDK	HLF	P-3003C	13	0960	Jan.09, 2016	Jan.09, 2019
V	Preamplifier	HP	8	447D		4A090 99	Dec. 12, 2017	Dec. 11, 2018
V	EMI Measurement Receiver	R&S	Ш	SR26	10	1377	Dec.12, 2017	Dec.11, 2018
V	Horn Antenna	TDK	HR	N-0118	13	0939	Jan. 09, 2016	Jan. 09, 2019
V	High Gain Horn Antenna	Schwarzbeck	BBH	HA-9170	6	691	Jan.06, 2016	Jan.06, 2019
V	Preamplifier	TDK	PA-	02-0118		S-305- 0066	Dec. 12, 2017	Dec. 11, 2018
V	Preamplifier	TDK	P/	A-02-2		S-307- 0003	Dec.12, 2017	Dec.11, 2018
$\overline{\checkmark}$	Loop antenna	Schwarzbeck	1	519B	00	8000	Mar. 26, 2016	Mar. 26, 2019
\checkmark	Band Reject Filter	Wainwright	235 24	WRCJV8- 2350-2400- 2483.5- 2533.5-40SS		4	Dec.12, 2017	Dec.11, 2018
			Sof	tware				
Used	Descr	Description Ma			turer		Name	Version
V	Test Software for Ra	Radiated disturbance Fara			d		EZ-EMC	Ver. UL-3A1
		Oth	ner in	strumen	its			
Used	Equipment	Manufacturer	Мо	del No.	Seri	ial No.	Last Cal.	Next Cal.
V	Spectrum Analyzer	Keysight	N:	9030A	5	55410 512	Dec.12, 2017	Dec.11, 2018
V	Power Meter	Keysight	N9	9031A		55416)24	Dec.12, 2017	Dec.11, 2018

10. 10	30/ (TTZ: (OD)					
	Power Sensor	Keysight	N9323A	MY55440	Dec.12, 2017	Dec.11, 2018

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6. ANTENNA PORT TEST RESULTS

6.1. ON TIME AND DUTY CYCLE

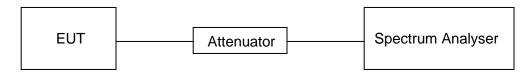
LIMITS

None; for reporting purposes only

PROCEDURE

FCC KDB 558074 Zero-Span Spectrum Analyzer Method

TEST SETUP



RESULTS

Mode	On Time (msec)	Period (msec)	Duty Cycle x (Linear)	Duty Cycle (%)	Duty Cycle Correction Factor (db)	1/T Minimum VBW (KHz)
11B	100	100	1	100	0	0.01
11G	100	100	1	100	0	0.01
11N20SISO	100	100	1	100	0	0.01
11N40SISO	100	100	1	100	0	0.01

Note: 1) Duty Cycle Correction Factor=10log(1/x).

2) Where: x is Duty Cycle(Linear)

3) Where: T is On Time (transmit duration)

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ON TIME AND DUTY CYCLE MID CH





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6.2. 6 dB BANDWIDTH

LIMITS

FCC Part15 (15.247) Subpart C					
Section	Test Item	Limit	Frequency Range (MHz)		
FCC 15.247(a)(2) RSS-247 5.1 (a)	6dB Bandwidth	>= 500KHz	2400-2483.5		
RSS-Gen Clause 6.6	99% Bandwidth	For reporting purposes only.	2400-2483.5		

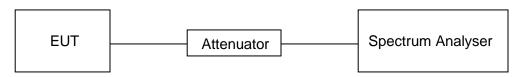
TEST PROCEDURE

Refer to FCC KDB 558074, connect the UUT to the spectrum analyser and use the following settings:

Center Frequency	The centre frequency of the channel under test
Detector	Peak
IRRW	For 6 dB Bandwidth :100K For 99% Bandwidth :1% to 5% of the occupied bandwidth
IV/BW	For 6dB Bandwidth : ≥3 x RBW For 99% Bandwidth : approximately 3xRBW
Trace	Max hold
Sweep	Auto couple

Allow the trace to stabilize and 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 and 99% relative to the maximum level measured in the fundamental emission.

TEST SETUP



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RESULTS

Test Mode	Test Antenna	Test Channel	6dB bandwidth (MHz)	99% bandwidth (MHz)	Result
		LCH	10.05	14.95	Pass
11B	Antenna 1	MCH	10.06	14.94	Pass
		HCH	10.07	14.98	Pass
	Antenna 1	LCH	16.57	16.46	Pass
11G		MCH	16.57	16.46	Pass
		HCH	16.56	16.46	Pass
		LCH	17.80	17.65	Pass
11N20SISO	Antenna 1	MCH	17.78	17.65	Pass
		HCH	17.78	17.65	Pass
		LCH	36.35	35.91	Pass
11N40SISO	Antenna 1	MCH	36.36	35.90	Pass
		HCH	36.37	35.91	Pass

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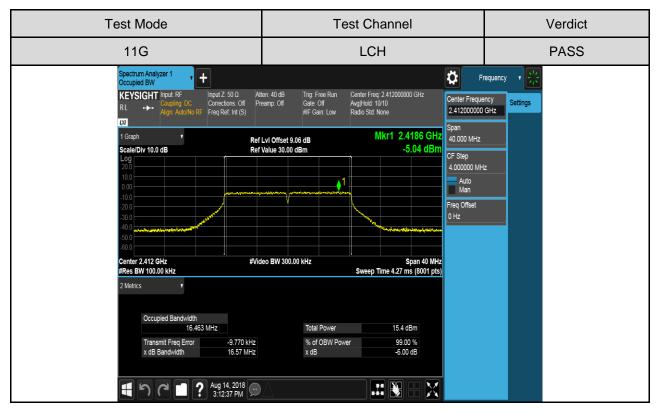
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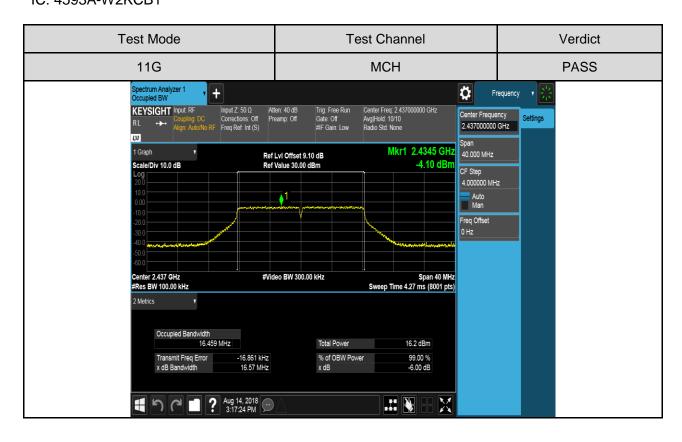
Test Graphs

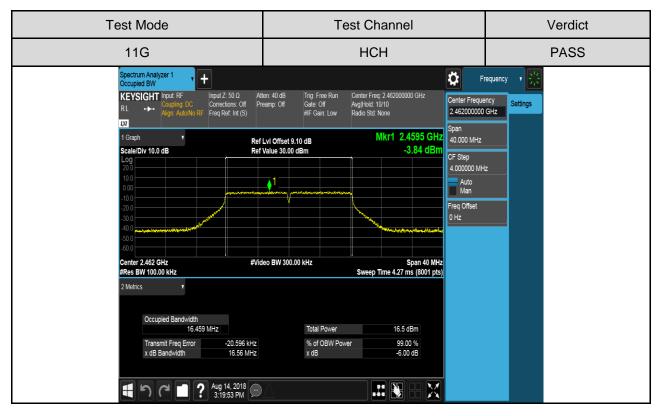


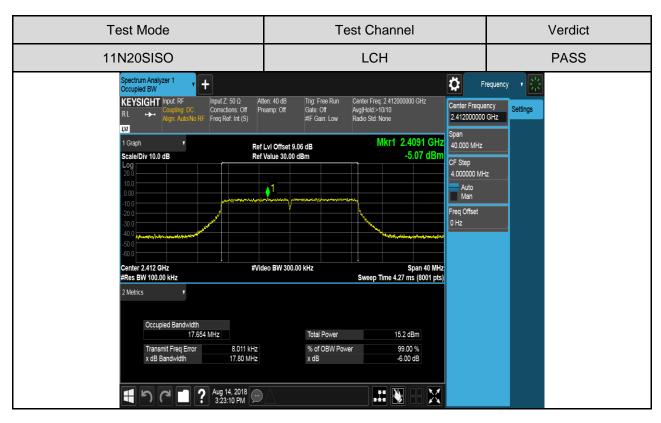


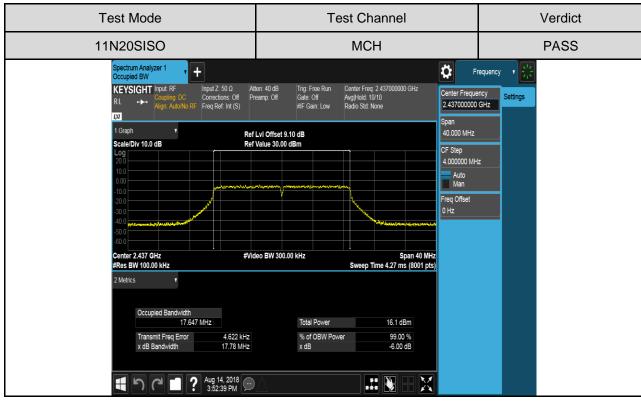


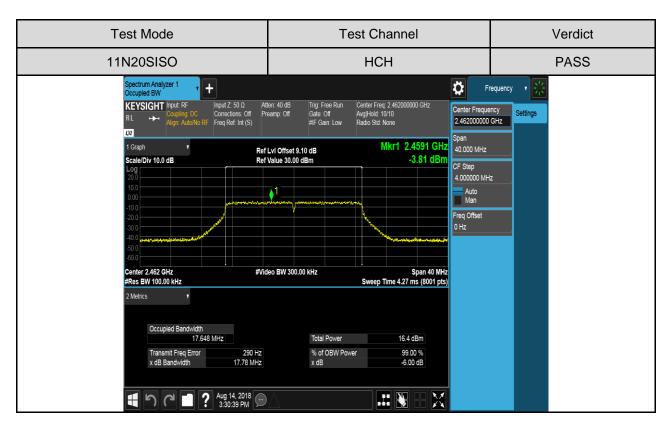


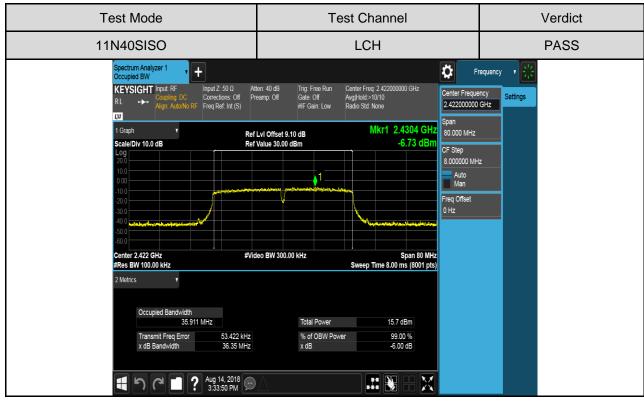




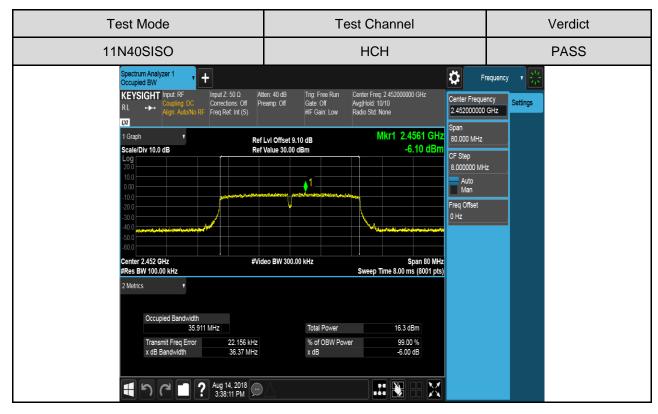












6.3. PEAK CONDUCTED OUTPUT POWER

LIMITS

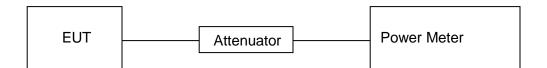
FCC Part15 (15.247) , Subpart C					
Section Test Item Limit Frequency Range (MHz)					
FCC 15.247(b)(3) RSS-247 5.4 (e)	Peak Output Power	1 watt or 30dBm	2400-2483.5		

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TEST PROCEDURE

Refer to FCC KDB 558074

TEST SETUP



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RESULTS

1) Maximum Peak Conducted Output Power

Test Mode	Test Antenna	Test Channel	Maximum Peak Conducted Output Power(dBm)	EIRP (dBm)	Result
		LCH	17.38	19.38	Pass
11B	Antenna 1	MCH	18.28	20.28	Pass
		HCH	18.42	20.42	Pass
		LCH	16.08	18.08	Pass
11G	Antenna 1	MCH	16.98	18.98	Pass
		HCH	17.21	19.21	Pass
		LCH	16.25	18.25	Pass
11N20SISO	Antenna 1	MCH	17.11	19.11	Pass
		HCH	17.40	19.40	Pass
		LCH	16.71	18.71	Pass
11N40SISO	Antenna 1	MCH	17.14	19.14	Pass
		HCH	17.38	19.38	Pass

2) Maximum Average Conducted Output Power

Test Mode	Test Antenna	Test Channel	Maximum Average Conducted Output Power(dBm)	EIRP (dBm)	Result
		LCH	15.06	17.06	Pass
11B	Antenna 1	MCH	15.96	17.96	Pass
		HCH	16.15	18.15	Pass
		LCH	9.53	11.53	Pass
11G	Antenna 1	MCH	10.44	12.44	Pass
		HCH	10.68	12.68	Pass
		LCH	9.54	11.54	Pass
11N20SISO	Antenna 1	MCH	10.44	12.44	Pass
		HCH	10.69	12.69	Pass
		LCH	9.49	11.49	Pass
11N40SISO	Antenna 1	MCH	9.93	11.93	Pass
		HCH	10.15	12.15	Pass

6.4. POWER SPECTRAL DENSITY

LIMITS

FCC Part15 (15.247) , Subpart C					
Section Test Item Limit Frequency Range (MHz)					
FCC §15.247 (e) RSS-247 5.2 (b)	Power Spectral Density	8 dBm in any 3 kHz band	2400-2483.5		

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TEST PROCEDURE

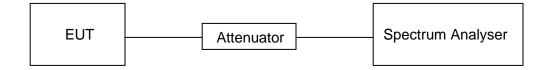
Refer to FCC KDB 558074, connect the UUT to the spectrum analyser and use the following settings:

Center Frequency	The centre frequency of the channel under test		
Detector	Peak		
RBW	3 kHz ≤ RBW ≤100 kHz		
VBW	≥3 × RBW		
Span	1.5 x DTS bandwidth		
Trace	Max hold		
Sweep time	Auto couple.		

Allow trace to fully stabilize and use the peak marker function to determine the maximum amplitude level within the RBW.

If measured value exceeds limit, reduce RBW (no less than 3 kHz) and repeat.

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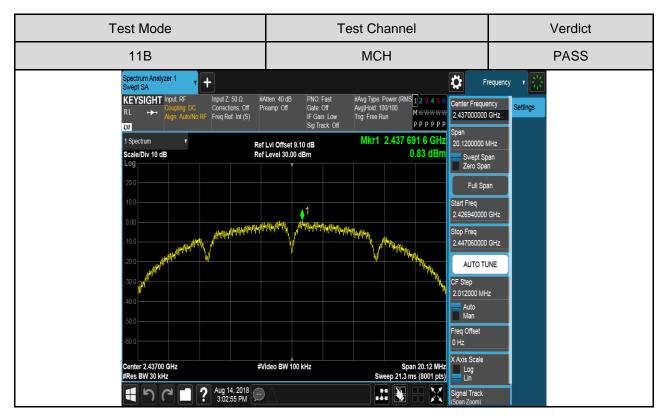
RESULTS

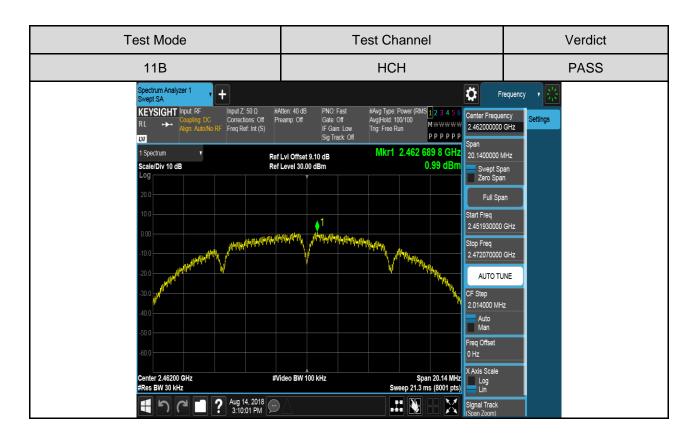
Test Mode	Test Antenna	Test Channel	Maximum Peak power spectral density (dBm/30KHz)	Limit (dBm/3KHz)	Result
	Antenna 1	LCH	-0.06	8	Pass
11B		MCH	0.83	8	Pass
		HCH	0.99	8	Pass
11G	Antenna 1	LCH	-7.60	8	Pass
		MCH	-6.77	8	Pass
		HCH	-6.60	8	Pass
11N20SISO	Antenna 1	LCH	-7.33	8	Pass
		MCH	-6.38	8	Pass
		HCH	-6.09	8	Pass
11N40SISO	Antenna 1	LCH	-10.16	8	Pass
		MCH	-9.76	8	Pass
		HCH	-9.17	8	Pass

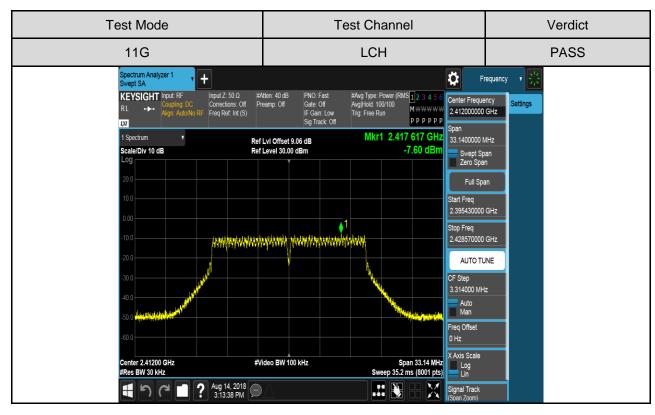
IC: 4593A-W2KCB1

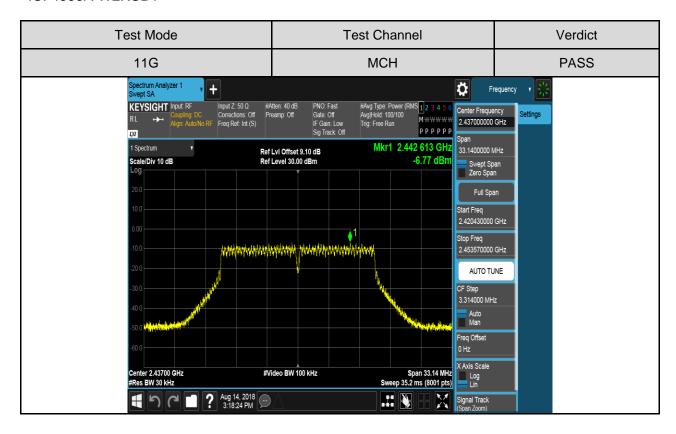
Test Graphs:

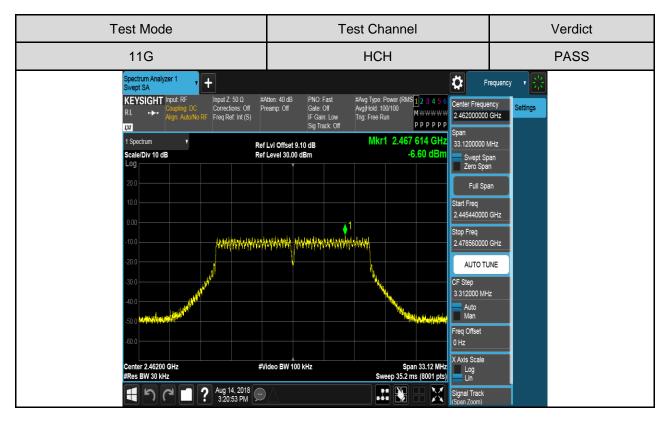


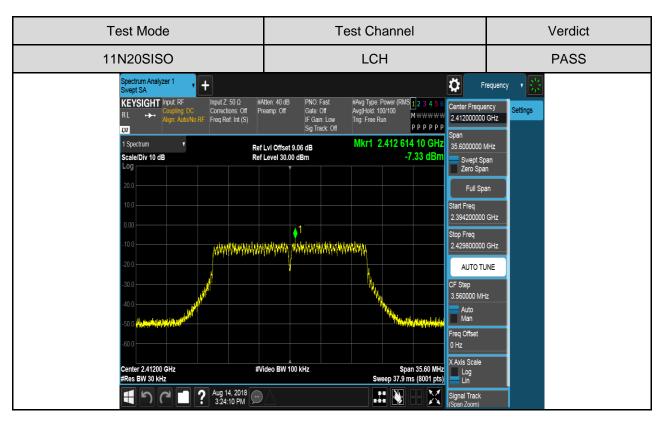


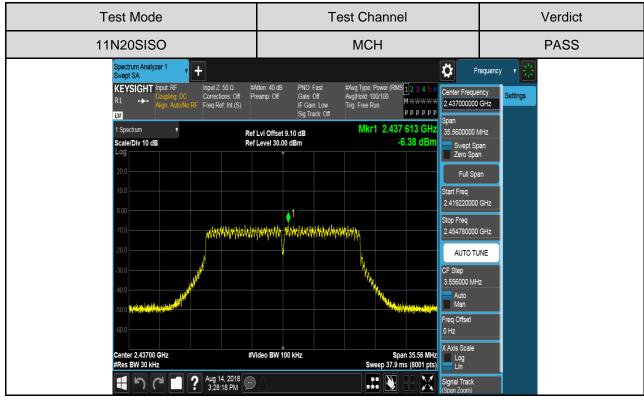


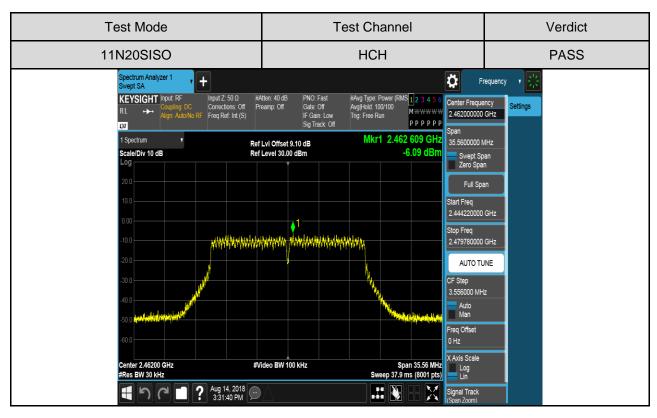


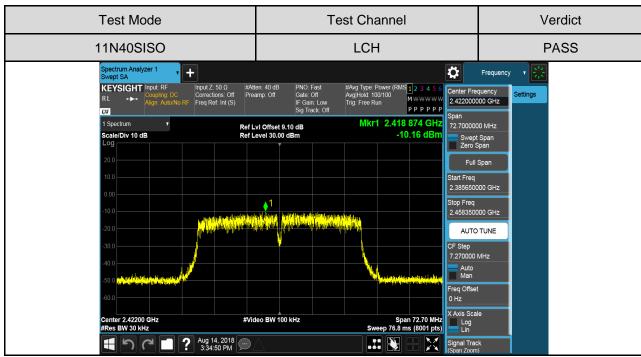


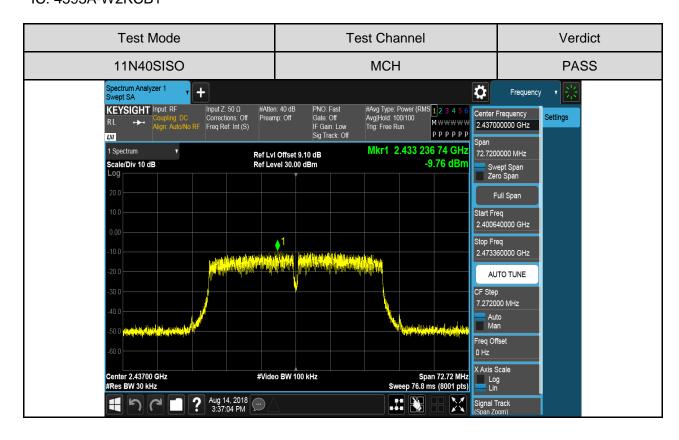


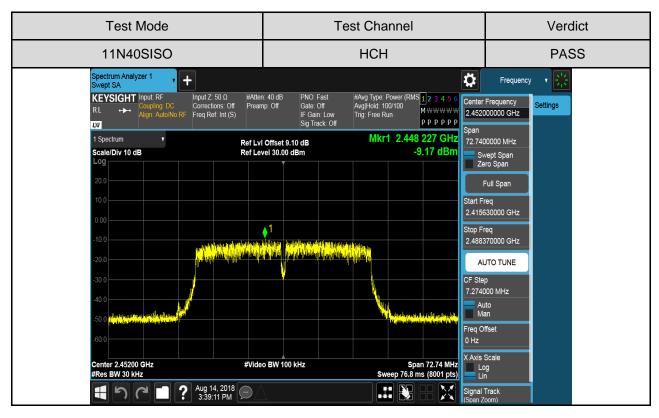












IC: 4593A-W2KCB1

6.5. CONDUCTED BANDEDGE AND SPURIOUS EMISSIONS

DATE: Aug. 20, 2018

LIMITS

FCC Part15 (15.247) , Subpart C			
Section	Test Item	Limit	
FCC §15.247 (d) RSS-247 5.5	Conducted Bandedge and Spurious Emissions	at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power	

TEST PROCEDURE

Refer to FCC KDB 558074, connect the UUT to the spectrum analyser and use the following

Center Frequency	The centre frequency of the channel under test
Detector	Peak
RBW	100K
VBW	≥3 × RBW
Span	1.5 x DTS bandwidth
Trace	Max hold
Sweep time	Auto couple.

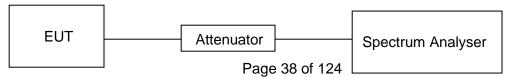
settings:

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

Span	Set the center frequency and span to encompass frequency range to be measured
Detector	Peak
RBW	100K
VBW	≥3 × RBW
measurement points	≥span/RBW
Trace	Max hold
Sweep time	Auto couple.

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

TEST SETUP



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Part I: Conducted Bandedge

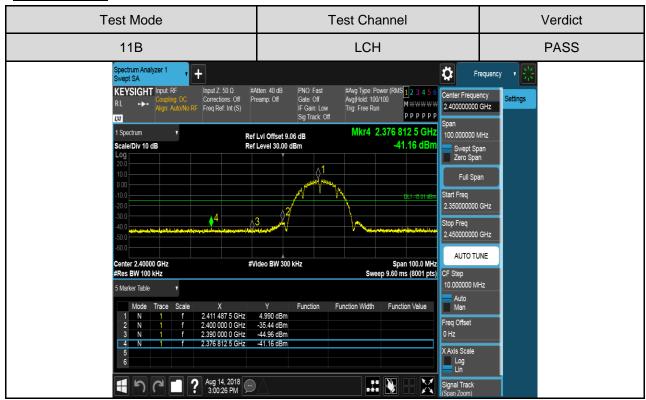
RESULTS TABLE

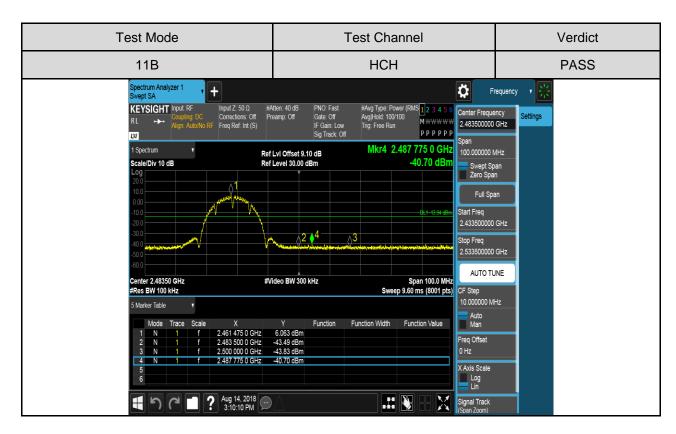
Test Mode	Test Antenna	Test Channel	Carrier Power[dBm]	Max. Spurious Level [dBm]	Limit [dBm]	Verdict
44D	11B Antenna 1	LCH	4.99	-41.16	-15.01	PASS
ПВ		HCH	6.06	-40.70	-13.94	PASS
11G Antenna 1	LCH	-5.04	-40.75	-25.04	PASS	
	Antenna i	HCH	-3.85	-40.44	-23.85	PASS
1111000100	44N000100 Antono 4	LCH	-5.14	-40.61	-25.14	PASS
11N20SISO Ant	Antenna 1	HCH	-4.01	-40.89	-24.01	PASS
11N40SISO	Antenna 1	LCH	-6.51	-40.74	-26.51	PASS
		HCH	-5.94	-40.73	-25.94	PASS

Remark: For the limit, it's 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 carrier power

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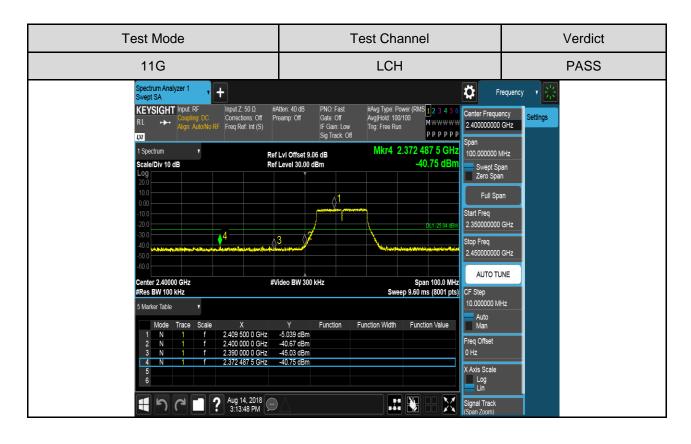
TEST GRAPHS

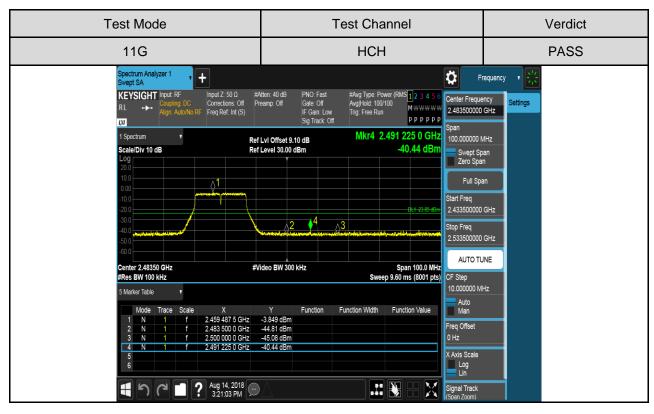




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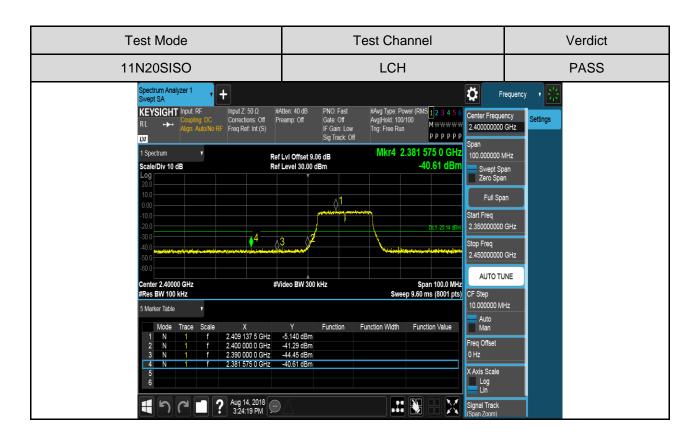
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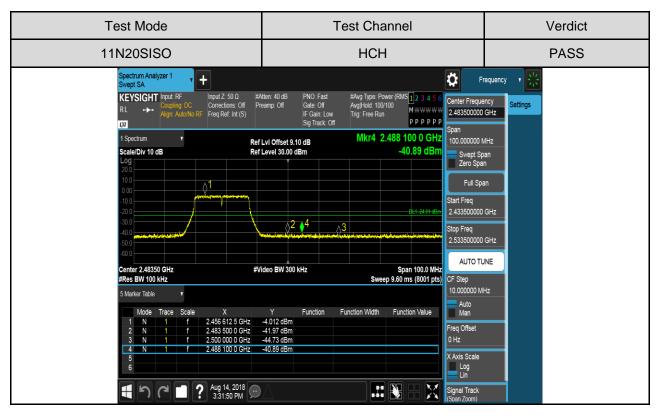




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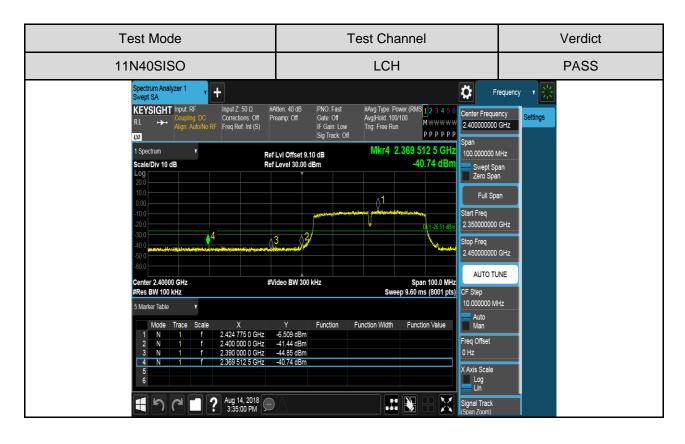
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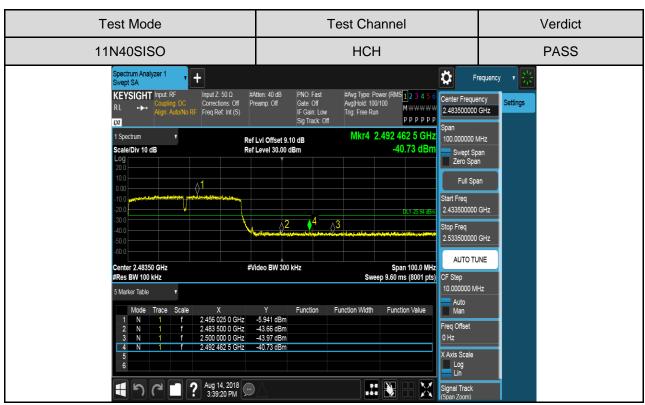




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Part II : Conducted Spurious Emissions

Test Result Table

Test Mode	Test Antenna	Channel	Pref(dBm)	Puw(dBm)	Verdict
11B	Antenna 1	LCH	4.94	<limit< td=""><td>PASS</td></limit<>	PASS
		MCH	5.837	<limit< td=""><td>PASS</td></limit<>	PASS
		HCH	6.022	<limit< td=""><td>PASS</td></limit<>	PASS
11G	Antenna 1	LCH	-5.069	<limit< td=""><td>PASS</td></limit<>	PASS
		MCH	-4.121	<limit< td=""><td>PASS</td></limit<>	PASS
		HCH	-3.942	<limit< td=""><td>PASS</td></limit<>	PASS
11N20SISO	Antenna 1	LCH	-4.774	<limit< td=""><td>PASS</td></limit<>	PASS
		MCH	-3.876	<limit< td=""><td>PASS</td></limit<>	PASS
		HCH	-3.746	<limit< td=""><td>PASS</td></limit<>	PASS
11N40SISO	Antenna 1	LCH	-6.497	<limit< td=""><td>PASS</td></limit<>	PASS
		MCH	-6.215	<limit< td=""><td>PASS</td></limit<>	PASS
		HCH	-6.065	<limit< td=""><td>PASS</td></limit<>	PASS

IC: 4593A-W2KCB1

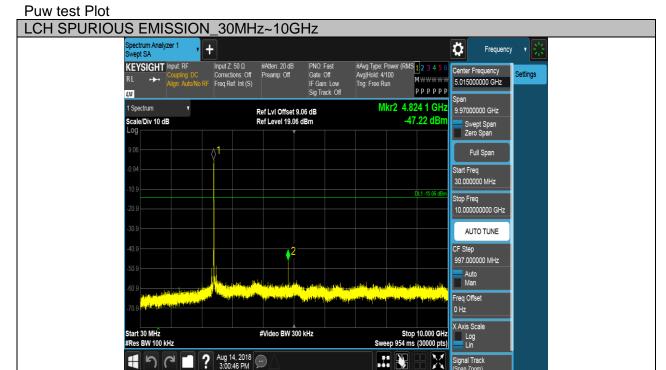
Test Plots Antenna1

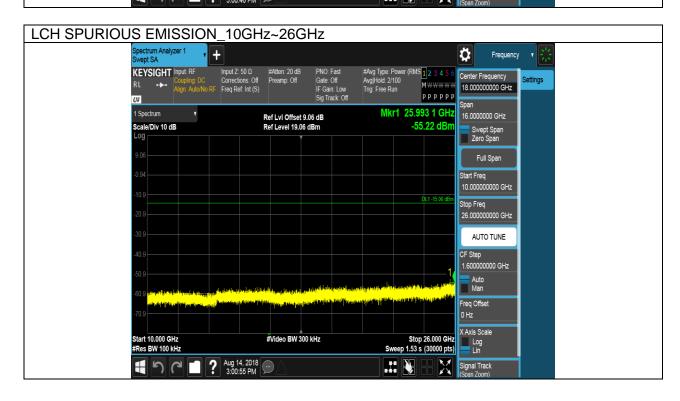
Test Mode	Channel	Verdict
11B	LCH	PASS

DATE: Aug. 20, 2018

Pref test Plot







REPORT NO: 478611066-1 FCC ID: SMHW2KCB1 IC: 4593A-W2KCB1 DATE: Aug. 20, 2018

Test Mode	Channel	Verdict
11B	MCH	PASS

Pref test Plot



