FCC PART 15C TEST REPORT FOR CERTIFICATION On Behalf of

Chunghsin Technology Group CO.,LTD

38.5inch HD SMART TV

Model Number: ELSW3917BF

FCC ID: 2AE2W-3917BF

Prepared for : Chunghsin Technology Group CO.,LTD

NO.618-2 GONGREN WEST ROAD, JIAOJIANG AREA,

TAIZHOU, ZHEJIANG, China

Prepared By: EST Technology Co., Ltd.

Santun(guantai Road), Houjie Town, DongGuan City,

GuangDong, China.

Tel: 86-769-83081888-808

Report Number: ESTE-R1706057

Date of Test : May 31~ June 08, 2017

Date of Report: June 10, 2017



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Test Report Verification

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	Serial No.:	
	Date of Test:	May 31~ June 08, 2017
Rules and Regulation	s Part 15 Subpar	t C:2016
C63.10:2013		
urement results were of Ltd. was assumed full se measurements. Als ically compliance with	contained in this responsibility for so, this report sho	
Tested by:		Approved by:
Som	2	Trementhe
Tony.Tang/ Engin	neer	IcemanHu / Manager
fail/F=failed n.a/N=r	not applicable – E	E.U.T=equipment under tested
1	report applies to above twithout written app Tested by: Tony.Tang/ Engi	Tested by: Tony.Tang/ Engineer



1. GENERAL INFORMATION

1.1. Description of Device (EUT)

Product Name	:	38.5inch HD SMART TV
Model Number	:	ELSW3917BF
N. 1.1.	-	TEEE 000 111 1 DGGG/CGW ODGW DDGW)
Modulation	:	IEEE 802.11b mode: DSSS(CCK,QPSK, BPSK)
		IEEE 802.11g mode: OFDM (BPSK/QPSK/16QAM/64QAM)
		IEEE 802.11n HT20 MHz mode: OFDM (BPSK/QPSK/16QAM/64QAM)
		IEEE 802.11n HT40 MHz mode: OFDM (BPSK/QPSK/16QAM/64QAM)
Operation Frequency	:	IEEE 802.11b/g: 2412 ~ 2462 MHz
		IEEE 802.11n HT20 : 2412 ~ 2462 MHz
		IEEE 802.11n HT40 : 2422 ~ 2452 MHz
		IEEE 802.11b: 11 Channels
Number of channel		IEEE 802.11g: 11 Channels
runioer or chamier	•	IEEE 802.11n HT20: 11 Channels
		IEEE 802.11n HT40: 7 Channels
	1	
Antenna and Gain	:	PCB Antenna with 2dBi gain (Max)



2. SUMMARY OF TEST

2.1. Summary of test result

Description of Test Item	Standard	Results
D 1: G 1 : 15 : :	FCC Part 15: 15.207	DAGG
Power Line Conducted Emission	ANSI C63.10:2013	PASS
	FCC Part 15: 15.209	
Radiated Emission	ANSI C63.10:2013	PASS
	FCC Part 15: 15.207 ANSI C63.10:2013 FCC Part 15: 15.209 ANSI C63.10:2013 KDB 558074 FCC Part 15: 15.247 ANSI C63.10:2013 KDB 558074 FCC Part 15: 15.247	
	FCC Part 15: 15.247	
Band Edge Compliance	ANSI C63.10:2013	PASS
	KDB 558074	
	FCC Part 15: 15.247	
Conducted spurious emissions	ANSI C63.10:2013	PASS
-	KDB 558074	
	FCC Part 15: 15.247	
6dB Bandwidth	ANSI C63.10:2013	PASS
	FCC Part 15: 15.207 ANSI C63.10:2013 FCC Part 15: 15.209 ANSI C63.10:2013 KDB 558074 FCC Part 15: 15.247 ANSI C63.10:2013 KDB 558074	
	FCC Part 15: 15.247	
Peak Output Power	ANSI C63.10:2013	PASS
1	KDB 558074	
	FCC Part 15: 15.247	
Power Spectral Density		PASS
· · · · · · · · · · · · · · · · · · ·		
Antenna requirement	FCC Part 15: 15.203	PASS

Note: 5558074 D01 DTS Meas Guidance v04



2.2. Test Facilities

EMC Lab : Certificated by CNAL, CHINA

Registration No.: L5288

Date of registration: November 13, 2014

Certificated by FCC, USA Registration No.: 989591

Date of registration: November 20, 2013

Certificated by Industry Canada Registration No.: 9405A-1

Date of registration: January 03, 2013

Certificated by VCCI, Japan

Registration No.: R-3663 & C-4103 Date of registration: July 25, 2011

Certificated by TUV Rheinland, Germany Registration No.: UA 50195514 0001 Date of registration: January 07, 2011

Certificated by TUV/PS, Shenzhen

Registration No.: SCN1017

Date of registration: January 27, 2011

Certificated by Intertek ETL SEMKO Registration No.: 2011-RTL-L1-18 Date of registration: April 28, 2011

Certificated by Siemic, Inc. Registration No.: SLCN021

Date of registration: November 8, 2011

Certificated by Nemko, Hong Kong

Registration No.: 175193

Date of registration: May 4, 2011

Name of Firm : EST Technology Co., Ltd.

Site Location : San Tun Management Zone, Houjie Town, Dongguan,

Guangdong, China



2.3. Assistant equipment used for test

2.3.1. N/A

2.4. Block Diagram

For radiated emissions test: EUT was placed on a turn table, which is 0.8 meter high above ground.EUT was be set into Wifi test mode by software before test.



(EUT: 38.5inch HD SMART TV)



2.5. Test mode

A special test software was used to control EUT work in Continuous TX mode, and select test channel, wireless mode and data rate.

Test mode	Lower	Center	Upper
	channel	channel	channel
IEEE 802.11b;IEEE 802.11g;IEEE 802.11n HT20	2412MHz	2437MHz	2462MHz
Transmitting			
IEEE 802.11b;IEEE 802.11g;IEEE 802.11n HT20	2412MHz	2437MHz	2462MHz
Receiving			
IEEE 802.11n HT40 Transmitting	2422MHz	2437MHz	2452MHz
IEEE 802.11n HT40 Receiving	2422MHz	2437MHz	2452MHz

2.6. Channel List for wifi

Channel List for wifi										
IEEE 802.11b;IEEE 802.11g;IEEE 802.11n HT20										
Channel Frequency (MHz) Channel Frequency (MHz) Channel Frequency (MHz)										
1	2412	6	2437	11	2462					
2	2417	7	2442							
3	2422	8	2447							
4	2427	9	2452							
5	2432	10	2457							
IEEE 802.11n HT40										
Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)					
1	2422	4	2437	7	2452					
2	2427	5	2442							
3	2432	6	2447							



2.7. Test Equipment

2.7.1. For conducted emission test

Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Next Cal.
EMI Test Receiver	Rohde & Schwarz	ESHS30	832354	June,28,16	1 Year
Artificial Mains Networ	Rohde & Schwarz	ENV216	101260	June,28,16	1 Year
Pulse Limiter	Rohde & Schwarz	ESH3-Z2	101100	June,28,16	1 Year

2.7.2. For radiated emission test(30-1000MHz)

Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Next Cal.
EMI Test Receiver	Rohde & Schwarz	ESVS10	100004	June,28,16	1 Year
Spectrum Analyzer	Agilent	E4411B	MY501406 97	June,28,16	1 Year
Bilog Antenna	Teseq	CBL 6111D	27090	June,28,16	1 Year
Signal Amplifier	Agilent	310N	187037	June,28,16	1 Year

2.7.3. For radiated emission test(above 1GHz)

Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Next Cal.
Horn Antenna	SCHWARZBECK	BBHA 9120 D	BBHA9120 D1002	June,28,16	1 Year
Signal Amplifier	SCHWARZBECK	BBV9718	9718-212	June,28,16	1 Year
Spectrum Analyzer	Agilent	E4408B	MY4421113 9	June,28,16	1 Year
RF Cable	Hubersuhner	RG 214/U	513423	June,28,16	1 Year

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3 POWER LINE CONDUCTED EMISSION TEST

3.1. Limit

	Maximum RF Line Voltage			
Frequency	Quasi-Peak Level	Average Level		
	$dB(\mu V)$	$dB(\mu V)$		
150kHz ~ 500kHz	66 ~ 56*	56 ~ 46*		
500kHz ~ 5MHz	56	46		
5MHz ~ 30MHz	60	50		

Notes: 1. * Decreasing linearly with logarithm of frequency.

3.3 Test Procedure

The EUT was placed on a non-metallic table, 10cm above the ground plane. The EUT Power connected to the power mains through a line impedance stabilization network (L.I.S.N. 1#). This provides a 50 ohm coupling impedance for the EUT (Please refer the block diagram of the test setup and photographs). The AC line are checked to find out the maximum conducted emission. In order to find the maximum emission levels, the relative positions of equipment and all of the interface cables shall be changed according to ANSI C63.10: 2013 on Conducted Emission Test.

The bandwidth of test receiver (R & S ESHS30) is set at 10kHz.

The frequency range from 150kHz to 30MHz is checked.

3.4. Test Result

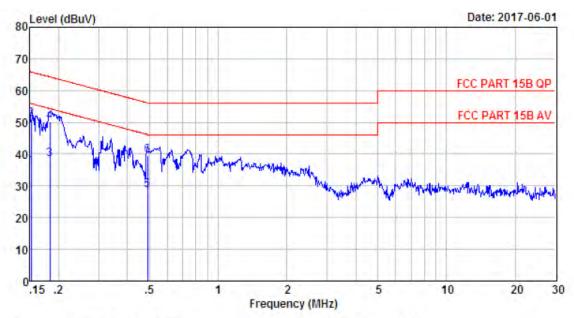
PASS. (All emissions not reported below are too low against the prescribed limits.)



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^{2.} The lower limit shall apply at the transition frequencies.

3.5. Test data



Site no : 844 Shield Room Data no. : 1

Env. / Ins. : Temp:25.3'C Humi:58% Press:101.50kPa LINE Phase : NEUTRAL

Limit : FCC PART 15B QP

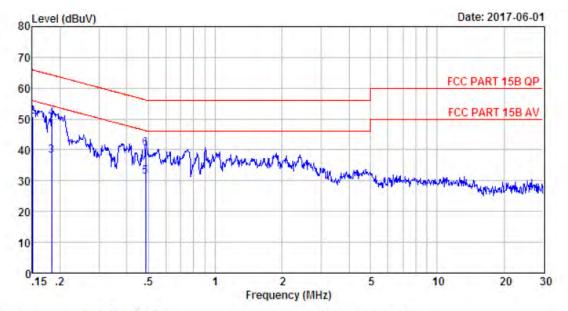
Engineer : Bible

EUT : 38.5inch HD SMARI TV

Power : AC 120V/60Hz
M/N : ELSW3917BF
Test Mode : TX Mode

	Freq. (MHz)	LISN Factor (dB/m)	Cable Loss (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	0.15	9.46	9.81	16.78	36.05	55.91	19.86	Average
2	0.15	9.46	9.81	31.78	51.05	65.91	14.86	QP
3	0.18	9.56	9.80	18.97	38.33	54.33	16.00	Average
4	0.18	9.56	9.80	30.97	50.33	64.33	14.00	QF
5	0.49	9.59	9.81	9.14	28.54	46.14	17.60	Average
6	0.49	9.59	9.81	20.14	39.54	56.14	16.60	QP





: 844 Shield Room Site no Data no. : 3 Env. / Ins. : Temp:25.3'C Humi:58% Press:101.50kPa LINE Phase : LINE

Limit : FCC PART 15B QF

Engineer

: Bible : 38.5inch HD SMART TV EUT

: AC 120V/60Hz Power : ELSW3917BF M/N Test Mode : TX Mode

	Freq.	LISN Factor (dB/m)	Cable Loss (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	0.15	9.61	9.81	16,49	35,91	56.00	20.09	Average
2	0.15	9.61	9.81	31.49	50.91	66.00	15.09	QP
3	0.18	9.61	9.80	18.64	38.05	54.33	16.28	Average
4	0.18	9.61	9.80	30.64	50.05	64.33	14.28	QP
5	0.49	9.61	9.81	11.94	31.36	46.23	14.87	Average
6	0.49	9.61	9.81	20.94	40.36	56.23	15.87	QP



4 RADIATED EMISSION TEST

4.1 Limit

4.1.1 15.209 limits

FREQUENCY	DISTANCE	FIELD STREN	NGTHS LIMIT
MHz	Meters	μV/m	$dB(\mu V)/m$
30 ~ 88	3	100	40.0
88 ~ 216	3	150	43.5
216 ~ 960	3	200	46.0
960 ~ 1000	3	500	54.0
Above 1000	3	74.0 dB(μV)/m (Peak)	
		54.0 dB(μV	V)/m (Average)

Remark : (1) Emission level $dB\mu V = 20 \log$ Emission level $\mu V/m$

- (2) The smaller limit shall apply at the cross point between two frequency bands.
- (3) Distance is the distance in meters between the measuring instrument, antenna and the closest point of any part of the device or system.

4.1.2 15.205 Restricted bands of operation

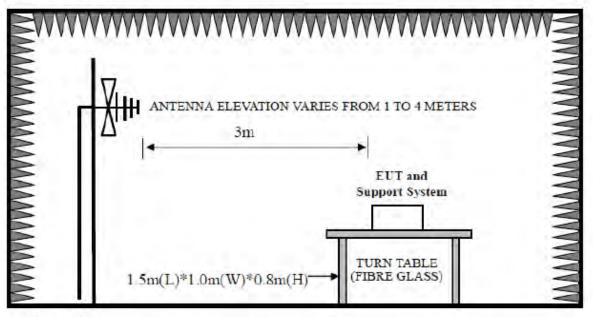
MHz	MHz	MHz	GHz
0.090 - 0.110	16.42 - 16.423	399.9 - 410	4.5 - 5.15
¹ 0.495 - 0.505	16.69475 - 16.69525	608 - 614	5.35 - 5.46
2.1735 - 2.1905	16.80425 - 16.80475	960 - 1240	7.25 - 7.75
4.125 - 4.128	25.5 - 25.67	1300 - 1427	8.025 - 8.5
4.17725 - 4.17775	37.5 - 38.25	1435 - 1626.5	9.0 - 9.2
4.20725 - 4.20775	73 - 74.6	1645.5 - 1646.5	9.3 - 9.5
6.215 - 6.218	74.8 - 75.2	1660 - 1710	10.6 - 12.7
6.26775 - 6.26825	108 - 121.94	1718.8 - 1722.2	13.25 - 13.4
6.31175 - 6.31225	123 - 138	2200 - 2300	14.47 - 14.5
8.291 - 8.294	149.9 - 150.05	2310 - 2390	15.35 - 16.2
8.362 - 8.366	156.52475 - 156.52525	2483.5 - 2500	17.7 - 21.4
8.37625 - 8.38675	156.7 - 156.9	2690 - 2900	22.01 - 23.12
8.41425 - 8.41475	162.0125 - 167.17	3260 - 3267	23.6 - 24.0
12.29 - 12.293	167.72 - 173.2	3332 - 3339	31.2 - 31.8
12.51975 - 12.52025	240 - 285	3345.8 - 3358	36.43 - 36.5
12.57675 - 12.57725	322 - 335.4	3600 - 4400	(2)

All the emissions appearing within 15.205 restricted frequency bands shall not exceed the limits shown in 15.209, all the other emissions shall be at least 20dB below the fundamental emissions, or comply with 15.209 limits.

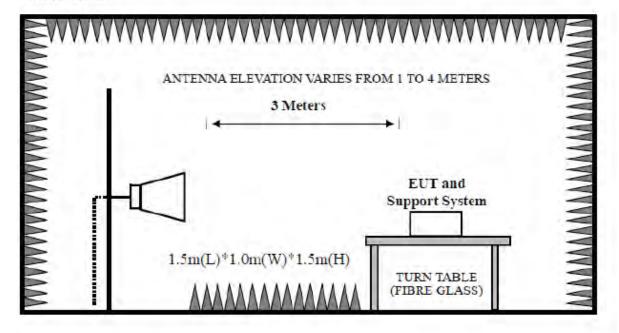


4.2. Block Diagram of Test setup

30~1000MHz



Above 1GHz





4.3. Test Procedure

EUT and its simulators are placed on a turn table, which is 1.5 meter high above ground. The turn table can rotate 360 degrees to determine the position of the maximum emission level. Power on the EUT and let it working in test mode, then test it. EUT is set 3 meters away from the receiving antenna, which is mounted on a antenna tower. The antenna can be moved up and down between 1 meter and 4 meters to find out the maximum emission level. Broadband antenna (calibrated bilog antenna) is used as receiving antenna. Both horizontal and vertical polarization of the antenna are set on test.

The bandwidth of the EMI test receiver is set at 120kHz for frequency range from 30MHz to 1000 MHz.

The bandwidth of the Spectrum's VBW is set at 3MHz and RBW is set at 1MHz for peak emissions measurement above 1GHz and 1MHz RBW, 10Hz VBW for average emissions measure above 1GHz

PEAK detector, 1MHz/1MHz for PAEK measurement, PEAK detector, 1MHz/10Hz for Average measurement

The frequency range from 30MHz to 10th harmonic (25GHz) are checked.

4.4. Test Result

PASS.

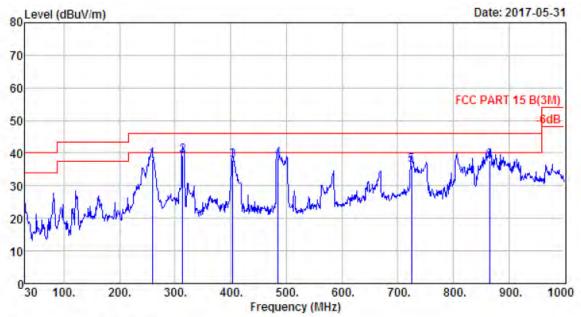
All the emissions from 30MHz to 25 GHz were comply with 15.209 limits.

- Note: 1. For emissions above 1GHz, if peak level comply with average limit, then the average level is deemed to comply with average limit.
 - 2. The frequency 2412MHz . 2422MHz . 2437MHz . 2452MHz and 2462 MHz is fundamental frequency which no limit, the limit on plots is automatically generated by the software, it's not fundamental limit, we can't remove it.



4.5. Test Data

30-1000 MHz



Site no. : 1# 966 Chamber Data no. : 15
Dis. / Ant. : 3m 27137 Ant. pol. : HORIZONTAL

Limit : FCC PART 15 B(3M)

Env. / Ins. : Temp:25.6'; Humi:62%; Press:101.52kPa

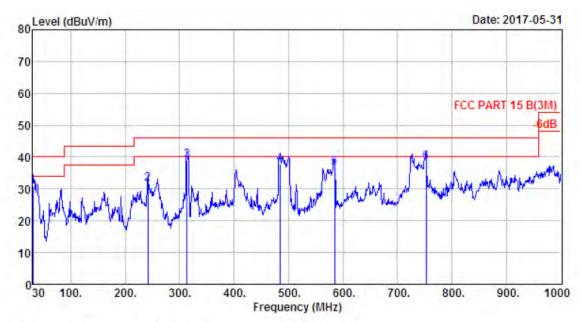
Engineer : Bible

EUT : 38.5inch HD SMART TV

Power : AC 120V/60Hz
M/N : ELSW3917BF
Test Mode : TX Mode

	Freq.	ANT Factor (dB/m)	Cable Loss (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	258.92	12.86	2.22	22.87	37.95	46.00	8.05	QP
2	313.24	13.31	2.44	23.60	39.35	46.00	6.65	QP
3	403.45	16.14	2.69	19.07	37.90	46.00	8.10	QP
4	484.93	17.63	3.07	17.54	38.24	46.00	7.76	QP
5	725.49	21.85	3.75	10.76	36.36	46.00	9.64	QP
6	865.17	22.89	3.78	11.26	37.93	46.00	8.07	QF





Site no. : 1# 966 Chamber Data no. : 16
Dis. / Ant. : 3m 27137 Ant. pol. : VERTICAL

Limit : FCC PART 15 B (3M)

Env. / Ins. : Temp:25.6'; Humi:62%; Press:101.52kPa

Engineer : Bible

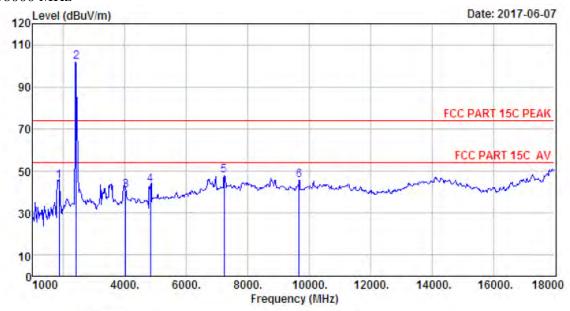
EUT : 38.5inch HD SMART TV

Power : AC 120V/60Hz M/N : ELSW3917BF Test Mode : TX Mode

	Freq.	ANT Factor (dB/m)	Cable Loss (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	30.00	18.51	0.65	11.98	31.14	40.00	8.86	QF
2	241.46	10.50	2.14	18.92	31.56	46.00	14.44	QP
3	313.24	13.31	2.44	23.15	38.90	46.00	7.10	QF
4	483.96	17.59	3.07	17.19	37.85	46.00	8.15	QP
5	584.84	19.47	3.37	13.72	36.56	46.00	9.44	QF
6	752.65	22.15	3.88	12.48	38.51	46.00	7.49	QF



1000-18000 MHz



Site no. : 1# 966 Chamber Data no. : 17
Dis. / Ant. : 3m ANT 1-18G Ant. pol. : VERTICAL

Limit : FCC PART 15C PEAK

Env. / Ins. : Temp:23.6'; Humi:56%; Press:101.52kPa

Engineer : Tony

EUT : 38.5inch HD SMART TV

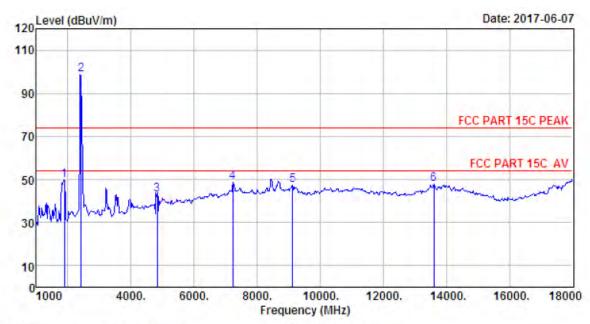
Power : AC 120V/60Hz M/N : ELSW3917BF

Test Mode : IEEE 802.11b CH1 2412TX

Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Amp Factor (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1850.00	25.15	5.63	35.27	49.72	45.23	74.00	28.77	Peak
2412,00	27.60	6.64	34.64	102.09	101.69	74.00	-27.69	Peak
4026.00	29.71	10.86	36.28	36.56	40.85	74.00	33.15	Peak
4824.00	31.28	11.84	35.66	35.94	43.40	74.00	30.60	Peak
7236.00	36.53	11.55	33.99	33.83	47.92	74.00	26.08	Peak
9670.00	38.01	11.67	35.09	30.81	45.40	74.00	28.60	Peak
	(MHz) 1850.00 2412.00 4026.00 4824.00 7236.00	Freq. Factor (MHz) (dB/m) 1850.00 25.15 2412.00 27.60 4026.00 29.71 4824.00 31.28 7236.00 36.53	Freq. Factor Loss (MHz) (dB/m) (dB) 1850.00 25.15 5.63 2412.00 27.60 6.64 4026.00 29.71 10.86 4824.00 31.28 11.84 7236.00 36.53 11.55	Freq. Factor Loss Factor (MHz) (dB/m) (dB) (dB) 1850.00 25.15 5.63 35.27 2412.00 27.60 6.64 34.64 4026.00 29.71 10.86 36.28 4824.00 31.28 11.84 35.66 7236.00 36.53 11.55 33.99	Freq. Factor Loss Factor Reading (MHz) (dB/m) (dB) (dB) (dBuV) 1850.00 25.15 5.63 35.27 49.72 2412.00 27.60 6.64 34.64 102.09 4026.00 29.71 10.86 36.28 36.56 4824.00 31.28 11.84 35.66 35.94 7236.00 36.53 11.55 33.99 33.83	Freq. Factor Loss Factor Reading Level (MHz) (dB/m) (dB) (dB) (dBuV) (dBuV/m) 1850.00 25.15 5.63 35.27 49.72 45.23 2412.00 27.60 6.64 34.64 102.09 101.69 4026.00 29.71 10.86 36.28 36.56 40.85 4824.00 31.28 11.84 35.66 35.94 43.40 7236.00 36.53 11.55 33.99 33.83 47.92	Freq. Factor Loss Factor Reading Level Limits (MHz) (dB/m) (dB) (dB) (dBuV) (dBuV/m) (dBuV/m) 1850.00 25.15 5.63 35.27 49.72 45.23 74.00 2412.00 27.60 6.64 34.64 102.09 101.69 74.00 4026.00 29.71 10.86 36.28 36.56 40.85 74.00 4824.00 31.28 11.84 35.66 35.94 43.40 74.00 7236.00 36.53 11.55 33.99 33.83 47.92 74.00	Freq. Factor Loss Factor Reading Level Limits Margin (MHz) (dB/m) (dB) (dB) (dBuV) (dBuV/m) (dBuV/m) (dB) 1850.00 25.15 5.63 35.27 49.72 45.23 74.00 28.77 2412.00 27.60 6.64 34.64 102.09 101.69 74.00 -27.69 4026.00 29.71 10.86 36.28 36.56 40.85 74.00 33.15 4824.00 31.28 11.84 35.66 35.94 43.40 74.00 30.60 7236.00 36.53 11.55 33.99 33.83 47.92 74.00 26.08

Remarks: 1. Emission Level= Antenna Factor + Cable Loss - Amp Factor + Reading.





Site no. : 1# 966 Chamber Dis. / Ant. : 3m ANT 1-18G Data no. : 18

Ant. pol. : HORIZONTAL

Limit : FCC PART 15C PEAK

Env. / Ins. : Temp:23.6'; Humi:56%; Press:101.52kPa

Engineer : Tony

: 38.5inch HD SMART TV EUT

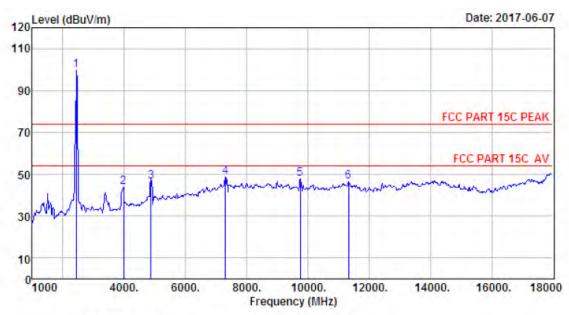
: AC 120V/60Hz Power : ELSW3917BF M/N

Test Mode : IEEE 802.11b CH1 2412TX

Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Amp Factor (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1884.00	25.28	5.75	35.23	54.01	49.81	74.00	24.19	Peak
2412.00	27.60	6.64	34.64	99.16	98.76	74.00	-24.76	Peak
4824.00	31.28	11.84	35.66	35.53	42.99	74.00	31.01	Peak
7236.00	36.53	11.55	33.99	34.50	48.59	74.00	25.41	Peak
9126.00	37.62	11.52	34.09	32.45	47.50	74.00	26.50	Peak
13614.00	40.40	11.36	32.68	28.67	47.75	74.00	26.25	Peak
	(MHz) 1884.00 2412.00 4824.00 7236.00 9126.00	Freq. Factor (MHz) (dB/m) 1884.00 25.28 2412.00 27.60 4824.00 31.28 7236.00 36.53 9126.00 37.62	Freq. Factor Loss (MHz) (dB/m) (dB) 1884.00 25.28 5.75 2412.00 27.60 6.64 4824.00 31.28 11.84 7236.00 36.53 11.55 9126.00 37.62 11.52	Freq. Factor Loss Factor (MHz) (dB/m) (dB) (dB) 1884.00 25.28 5.75 35.23 2412.00 27.60 6.64 34.64 4824.00 31.28 11.84 35.66 7236.00 36.53 11.55 33.99 9126.00 37.62 11.52 34.09	Freq. Factor Loss Factor Reading (MHz) (dB/m) (dB) (dB) (dBuV) 1884.00 25.28 5.75 35.23 54.01 2412.00 27.60 6.64 34.64 99.16 4824.00 31.28 11.84 35.66 35.53 7236.00 36.53 11.55 33.99 34.50 9126.00 37.62 11.52 34.09 32.45	Freq. Factor Loss Factor Reading Level (MHz) (dB/m) (dB) (dB) (dBuV) (dBuV/m) 1884.00 25.28 5.75 35.23 54.01 49.81 2412.00 27.60 6.64 34.64 99.16 98.76 4824.00 31.28 11.84 35.66 35.53 42.99 7236.00 36.53 11.55 33.99 34.50 48.59 9126.00 37.62 11.52 34.09 32.45 47.50	Freq. Factor Loss Factor Reading Level Limits (MHz) (dB/m) (dB) (dB) (dBuV) (dBuV/m) (dBuV/m) 1884.00 25.28 5.75 35.23 54.01 49.81 74.00 2412.00 27.60 6.64 34.64 99.16 98.76 74.00 4824.00 31.28 11.84 35.66 35.53 42.99 74.00 7236.00 36.53 11.55 33.99 34.50 48.59 74.00 9126.00 37.62 11.52 34.09 32.45 47.50 74.00	Freq. Factor Loss Factor Reading Level Limits Margin (MHz) (dB/m) (dB) (dB) (dBuV) (dBuV/m) (dBuV/m) (dB) 1884.00 25.28 5.75 35.23 54.01 49.81 74.00 24.19 2412.00 27.60 6.64 34.64 99.16 98.76 74.00 -24.76 4824.00 31.28 11.84 35.66 35.53 42.99 74.00 31.01 7236.00 36.53 11.55 33.99 34.50 48.59 74.00 25.41 9126.00 37.62 11.52 34.09 32.45 47.50 74.00 26.50

Remarks: 1. Emission Level= Antenna Factor + Cable Loss - Amp Factor + Reading.





Site no. : 1# 966 Chamber Data no. : 19
Dis. / Ant. : 3m ANT 1-18G Ant. pol. : VERTICAL

Limit : FCC PART 15C PEAK

Env. / Ins. : Temp:23.6'; Humi:56%; Press:101.52kPa

Engineer : Tony

EUT : 38.5inch HD SMART TV

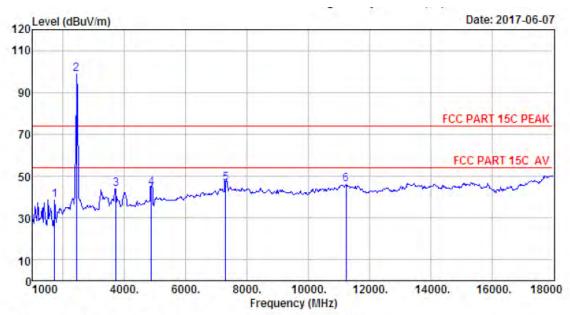
Power : AC 120V/60Hz M/N : ELSW3917BF

Test Mode : IEEE 802.11b CH6 2437TX

	Freq.	Ant. Factor (dB/m)	Cable Loss (dB)	Amp Factor (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	2437.00	27.60	6.67	34.85	100.04	99.46	74.00	-25.46	Peak
2	3975.00	29.60	10.81	36.42	39.85	43.84	74.00	30,16	Peak
3	4874.00	31.37	12.07	35.76	38.63	46.31	74.00	27.69	Peak
4	7311.00	36.55	11.57	34.12	34.51	48.51	74.00	25.49	Peak
5	9755.00	38.13	11.65	35.10	33.00	47.68	74.00	26.32	Peak
6	11336.00	39.30	11.04	33.44	29.39	46.29	74.00	27.71	Peak
6	11336.00	39.30	11.04	33.44	29.39	46.29	74.00	27.71	Peak

Remarks: 1, Emission Level= Antenna Factor + Cable Loss - Amp Factor + Reading.





: 1# 966 Chamber Site no. Data no. : 20

Dis, / Ant. : 3m ANT 1-18G Limit : FCC PART 15C PEAK Ant. pol. : HORIZONTAL

Env. / Ins. : Temp:23.6'; Humi:56%; Press:101.52kPa

Engineer : Tony

EUI : 38.5inch HD SMART TV

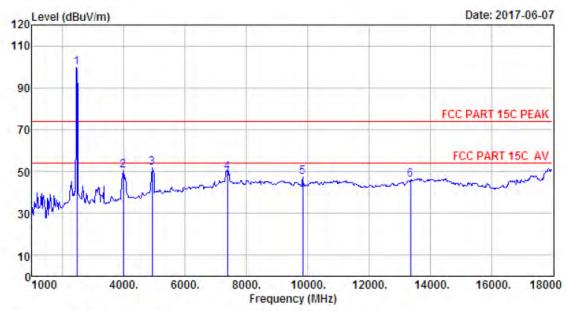
Power : AC 120V/60Hz M/N : ELSW3917BF

Test Mode : IEEE 802.11b CH6 2437TX

	Freq.	Ant. Factor (dB/m)	Cable Loss (dB)	Amp Factor (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	1714.00	24.73	5.13	35.17	44.04	38.73	74.00	35.27	Peak
2	2437.00	27.60	6.67	34.85	99.17	98.59	74.00	-24.59	Peak
- 3	3720.00	28.92	9.68	36.28	41.36	43.68	74.00	30.32	Peak
4	4874.00	31.37	12.07	35.76	36.60	44.28	74.00	29.72	Peak
5	7311.00	36.55	11.57	34.12	32.33	46.33	74.00	27.67	Peak
6	11234.00	39.37	11.12	33.25	28.66	45.90	74.00	28.10	Peak

Remarks: 1. Emission Level= Antenna Factor + Cable Loss - Amp Factor + Reading.





Site no. : 1# 966 Chamber Data no. : 21

Dis. / Ant. : 3m ANT 1-18G Ant. pol. : HORIZONTAL

Limit : FCC PART 15C PEAK

Env. / Ins. : Temp:23.6'; Humi:56%; Press:101.52kPa

Engineer : Tony

EUT : 38.5inch HD SMART TV

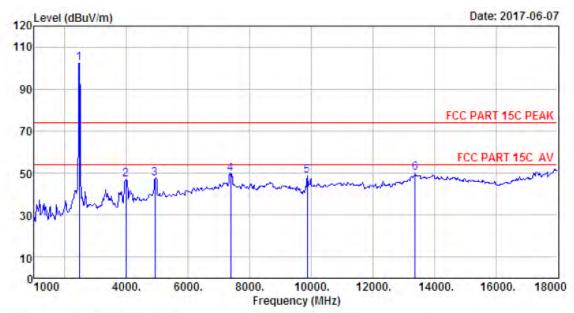
Power : AC 120V/60Hz M/N : ELSW3917BF

Test Mode : IEEE 802.11b CH11 2462TX

	Freq.	Ant. Factor (dB/m)	Cable Loss (dB)	Amp Factor (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	2462.00	27.58	6.69	34.98	100.51	99.80	74.00	-25.80	Peak
2	3975.00	29.60	10.81	36.42	46.61	50.60	74.00	23.40	Peak
3	4924.00	31.45	12.29	35.91	43.94	51.77	74.00	22.23	Peak
4	7386.00	36.57	11.59	34.23	35.66	49.59	74.00	24.41	Peak
5	9840.00	38.16	11.63	35.03	32.80	47.56	74.00	26.44	Peak
6	13359.00	39.74	11.48	32.93	27.59	45.88	74.00	28.12	Peak

Remarks: 1. Emission Level= Antenna Factor + Cable Loss - Amp Factor + Reading.





Site no. : 1# 966 Chamber Data no. : 22
Dis. / Ant. : 3m ANT 1-18G Ant. pol. : VERTICAL

Limit : FCC PART 15C PEAK

Env. / Ins. : Temp:23.6'; Humi:56%; Press:101.52kPa

Engineer : Tony

EUT : 38.5inch HD SMART TV

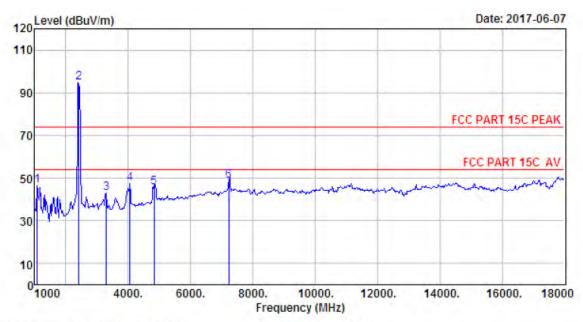
Power : AC 120V/60Hz M/N : ELSW3917BF

Test Mode : IEEE 802.11b CH11 2462TX

781.	Freq.	Ant. Factor (dB/m)	Cable Loss (dB)	Amp Factor (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	2462.00	27.58	6.69	34,98	102.90	102.19	74.00	-28.19	Peak
2	3975.00	29.60	10.81	36.42	43.14	47.13	74.00	26.87	Peak
3	4924.00	31.45	12.29	35,91	39.65	47.48	74.00	26.52	Peak
4	7386.00	36.57	11.59	34.23	35.49	49.42	74.00	24.58	Peak
5	9874.00	38.15	11.62	35.01	33.77	48.53	74.00	25.47	Peak
6	13376.00	39.78	11.48	32.91	31.51	49.86	74.00	24.14	Peak

Remarks: 1. Emission Level= Antenna Factor + Cable Loss - Amp Factor + Reading.





Site no. : 1# 966 Chamber Data no. : 23
Dis. / Ant. : 3m ANT 1-18G Ant. pol. : VERTICAL

Limit : FCC PART 15C PEAK

Env. / Ins. : Temp:23.6'; Humi:56%; Press:101.52kPa

Engineer : Tony

EUT : 38.5inch HD SMART TV

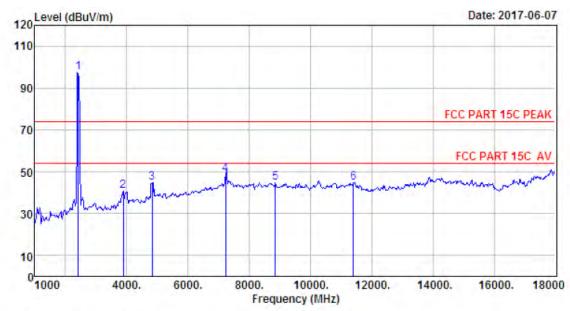
Power : AC 120V/60Hz M/N : ELSW3917BF

Test Mode : IEEE 802.11g CH1 2412TX

	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Amp Factor (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	1085.00	24.15	3.59	35.31	54.01	46.44	74.00	27.56	Peak
2	2412.00	27.60	6.64	34.64	95.35	94.95	74.00	-20.95	Peak
3	3295.00	27.80	8.84	36.11	42.50	43.03	74.00	30.97	Peak
4	4060.00	29.77	10.83	36.18	42.85	47.27	74.00	26.73	Peak
5	4824.00	31.28	11.84	35.66	38.32	45.78	74.00	28.22	Peak
6	7236.00	36.53	11.55	33.99	34.63	48.72	74.00	25.28	Peak

Remarks: 1. Emission Level= Antenna Factor + Cable Loss - Amp Factor + Reading.





Site no. : 1# 966 Chamber Data no. : 24

Dis. / Ant. : 3m ANT 1-18G Ant. pol. : HORIZONTAL

Limit : FCC PART 15C PEAK

Env. / Ins. : Temp:23.6'; Humi:56%; Fress:101.52kPa

Engineer : Tony

EUT : 38.5inch HD SMART TV

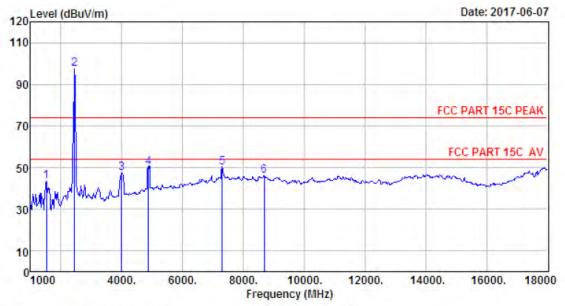
Fower : AC 120V/60Hz M/N : ELSW3917BF

Test Mode : IEEE 802.11g CH1 2412TX

	Freq.	Ant. Factor (dB/m)	Cable Loss (dB)	Amp Factor (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	2412.00	27.60	6.64	34.64	97.81	97.41	74.00	-23.41	Peak
2	3890.00	29.36	10.43	36.44	37.47	40.82	74.00	33.18	Peak
3	4824.00	31.28	11.84	35.66	37.36	44.82	74.00	29.18	Peak
4	7236.00	36.53	11.55	33.99	34.59	48.68	74.00	25.32	Peak
5	8854.00	37.48	11.46	34.19	29.86	44.61	74.00	29.39	Peak
6	11404.00	39.25	10.99	33.57	27.94	44.61	74.00	29.39	Peak

Remarks: 1. Emission Level= Antenna Factor + Cable Loss - Amp Factor + Reading.





Site no. : 1# 966 Chamber Data no. : 25

Dis. / Ant. : 3m ANT 1-18G Ant. pol. : HORIZONTAL

Limit : FCC PART 15C PEAK

Env. / Ins. : Temp:23.6'; Humi:56%; Press:101.52kPa

Engineer : Tony

EUT : 38.5inch HD SMART TV

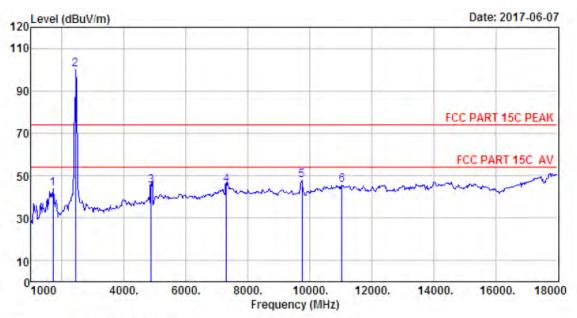
Power : AC 120V/60Hz M/N : ELSW3917BF

Test Mode : IEEE 802.11g CH6 2437TX

	Freq.	Ant. Factor (dB/m)	Cable Loss (dB)	Amp Factor (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	1527.00	24.88	4,44	35,17	49.27	43.42	74.00	30.58	Peak
2	2441.00	27.60	6.67	34.85	97.80	97.22	74.00	-23.22	Peak
3	3992.00	29.65	10.89	36.38	43.25	47.41	74.00	26.59	Peak
4	4874.00	31.37	12.07	35.76	42.54	50.22	74.00	23.78	Peak
5	7311.00	36.55	11.57	34.12	36.09	50.09	74.00	23.91	Peak
6	8684.00	37.32	11.45	33.66	30.97	46.08	74.00	27.92	Peak

Remarks: 1. Emission Level= Antenna Factor + Cable Loss - Amp Factor + Reading.





Site no. : 1# 966 Chamber Data no. : 26
Dis. / Ant. : 3m ANT 1-18G Ant. pol. : VERTICAL

Limit : FCC PART 15C PEAK

Env. / Ins. : Temp:23.6'; Humi:56%; Press:101.52kPa

Engineer : Tony

EUT : 38,5inch HD SMART TV

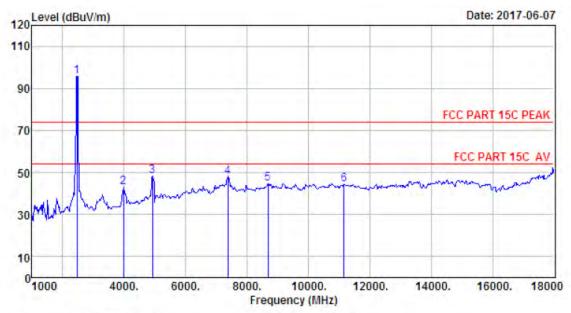
Power : AC 120V/60Hz M/N : ELSW3917BF

Test Mode : IEEE 802.11g CH6 2437TX

25.3%	Freq.	Ant. Factor (dB/m)	Cable Loss (dB)	Amp Factor (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	1697.00	24.68	5.07	35.15	49.05	43.65	74.00	30.35	Peak
2	2437.00	27.60	6.67	34.85	100.44	99.86	74.00	-25.86	Peak
3	4874.00	31.37	12.07	35.76	37.57	45.25	74.00	28.75	Peak
4	7311.00	36.55	11.57	34.12	31.69	45.69	74.00	28.31	Peak
5	9755.00	38.13	11.65	35.10	33.16	47.84	74.00	26.16	Peak
6	11047.00	39.49	11.25	33.92	28.81	45.63	74.00	28.37	Peak

Remarks: 1. Emission Level= Antenna Factor + Cable Loss - Amp Factor + Reading.





Site no. : 1# 966 Chamber Data no. : 27 Dis. / Ant. : 3m ANT 1-18G Limit : FCC PART 15C PEAK Ant. pol. : VERTICAL

Env. / Ins. : Temp:23.6'; Humi:56%; Press:101.52kPa

Engineer : Tony

EUT : 38.5inch HD SMART TV

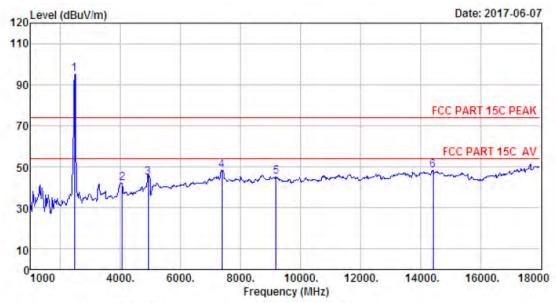
: AC 120V/60Hz Power M/N : ELSW3917BF

: IEEE 802.11g CH11 2462TX Test Mode

2000	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Amp Factor (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	2462.00	27.58	6.69	34,98	96.53	95.82	74.00	-21.82	Peak
2	3975.00	29.60	10.81	36.42	38.90	42.89	74.00	31.11	Peak
3	4924.00	31.45	12.29	35.91	40.43	48.26	74.00	25.74	Peak
4	7386.00	36.57	11.59	34.23	33.88	47.81	74.00	26.19	Peak
5	8684.00	37.32	11.45	33.66	29.60	44.71	74.00	29.29	Peak
6	11166.00	39.41	11.17	33.31	27.16	44.43	74.00	29.57	Peak

Remarks: 1. Emission Level= Antenna Factor + Cable Loss - Amp Factor + Reading.





Site no. : 1# 966 Chamber Data no. : 28

Dis. / Ant. : 3m ANT 1-18G Ant, pol, : HORIZONTAL

Limit : FCC PART 15C PEAK

Env. / Ins. : Temp:23.6'; Humi:56%; Press:101.52kPa

Engineer : Tony

EUT : 38.5inch HD SMART TV

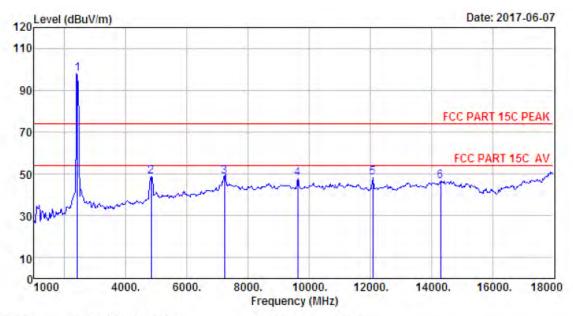
Power : AC 120V/60Hz M/N : ELSW3917BF

Test Mode : IEEE 802.11g CH11 2462TX

	Freq.	Ant. Factor (dB/m)	Cable Loss (dB)	Amp Factor (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	2462.00	27.58	6.69	34.98	95.91	95.20	74.00	-21.20	Peak
2	4060.00	29.77	10.83	36.18	37.61	42.03	74.00	31.97	Peak
3	4924.00	31.45	12.29	35.91	37.05	44.88	74.00	29.12	Peak
4	7386.00	36.57	11.59	34.23	34.51	48.44	74.00	25.56	Peak
5	9194.00	37.75	11.55	34.18	30.01	45.13	74.00	28.87	Peak
6	14430.00	41.82	10.93	33.41	28.80	48.14	74.00	25.86	Peak

Remarks: 1. Emission Level= Antenna Factor + Cable Loss - Amp Factor + Reading.





Data no. : 29 Ant, pol. : VERTICAL : 1# 966 Chamber Site no.

Dis. / Ant. : 3m ANT 1-18G

: FCC PART 15C PEAK Limit

Env. / Ins. : Temp:23.6'; Humi:56%; Press:101.52kPa

Engineer : Tony

EUT : 38.5inch HD SMART TV

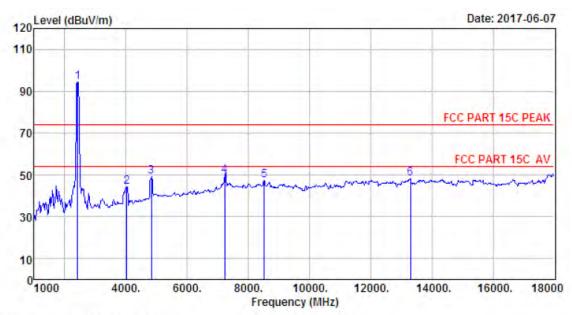
Power : AC 120V/60Hz : ELSW3917BF M/N

: IEEE 802.11n HT20 CH1 2412TX Test Mode

	Freq.	Ant. Factor (dB/m)	Cable Loss (dB)	Amp Factor (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	2412.00	27.60	6.64	34.64	98.16	97.76	74.00	-23.76	Peak
2	4824.00	31.28	11.84	35.66	41.32	48.78	74.00	25.22	Peak
3	7236.00	36.53	11.55	33.99	34.73	48.82	74.00	25.18	Peak
4	9636.00	37.96	11.68	35.09	33.47	48.02	74.00	25.98	Peak
5	12084.00	38.64	11.33	33.56	31.89	48.30	74.00	25.70	Peak
6	14311.00	41.73	10.92	33.42	27.43	46.66	74.00	27.34	Peak

Remarks: 1. Emission Level= Antenna Factor + Cable Loss - Amp Factor + Reading.





: 1# 966 Chamber Site no.

Data no. : 30 Ant. pol. : HORIZONTAL Dis. / Ant. : 3m ANT 1-18G

: FCC PART 15C PEAK Limit

Env. / Ins. : Temp:23.6'; Humi:56%; Press:101.52kPa

Engineer : Tony

: 38.5inch HD SMART TV EUT

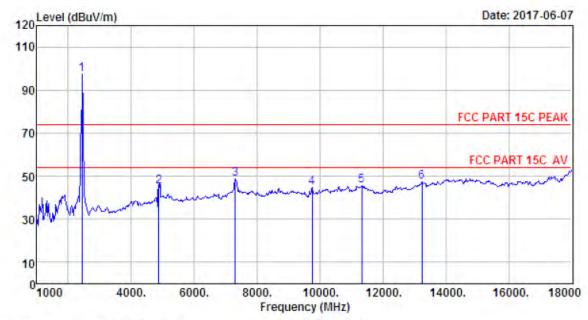
Power : AC 120V/60Hz : ELSW3917BF M/N

: IEEE 802.11n HT20 CH1 2412TX Test Mode

	Freq.	Ant. Factor (dB/m)	Cable Loss (dB)	Amp Factor (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	2412.00	27.60	6.64	34.64	94.53	94.13	74.00	-20.13	Peak
2	4026.00	29.71	10.86	36.28	40.05	44.34	74.00	29.66	Peak
3	4824.00	31.28	11.84	35.66	41.81	49.27	74.00	24.73	Peak
4	7236.00	36.53	11.55	33.99	35.53	49.62	74.00	24.38	Peak
5	8514.00	36.96	11.45	34.07	33.00	47.34	74.00	26.66	Peak
6	13308.00	39.62	11.47	32.94	29.89	48.04	74.00	25.96	Peak

Remarks: 1. Emission Level= Antenna Factor + Cable Loss - Amp Factor + Reading.





Site no. : 1# 966 Chamber Data no. : 31
Dis. / Ant. : 3m ANT 1-18G Ant. pol. : VERTICAL

Limit : FCC PART 15C PEAK

Env. / Ins. : Temp:23.6'; Humi:56%; Press:101.52kPa

Engineer : Tony

EUT : 38.5inch HD SMART TV

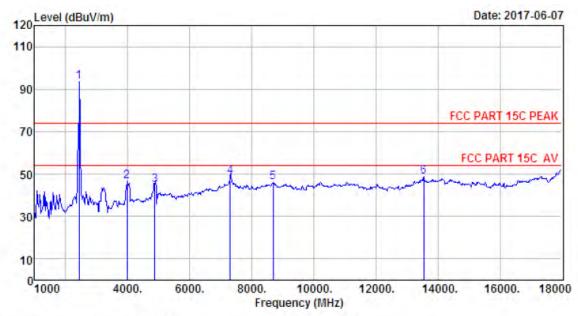
Power : AC 120V/60Hz M/N : ELSW3917BF

Test Mode : IEEE 802.11n HT20 CH6 2437TX

	Freq.	Ant. Factor (dB/m)	Cable Loss (dB)	Amp Factor (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	2437.00	27.60	6.67	34.85	97.84	97.26	74,00	-23.26	Peak
2	4874.00	31.37	12.07	35.76	37.50	45.18	74.00	28.82	Peak
3	7311.00	36.55	11.57	34.12	34.61	48.61	74.00	25.39	Peak
4	9755.00	38.13	11.65	35.10	30.17	44.85	74.00	29.15	Peak
5	11336.00	39.30	11.04	33.44	28.52	45.42	74.00	28.58	Peak
6	13240.00	39.46	11.46	32.88	29.18	47.22	74.00	26.78	Peak

Remarks: 1. Emission Level= Antenna Factor + Cable Loss - Amp Factor + Reading.





Site no. : 1# 966 Chamber Data no. : 32
Dis, / Ant. : 3m ANT 1-18G Ant. pol. : HORIZONTAL

Limit : FCC PART 15C PEAK

Env. / Ins. : Temp:23.6'; Humi:56%; Press:101.52kPa

Engineer : Tony

EUT : 38.5inch HD SMART TV

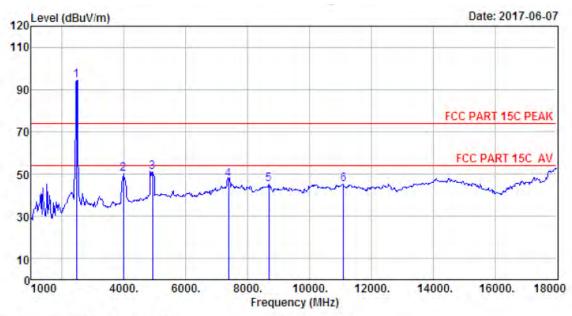
Power : AC 120V/60Hz M/N : ELSW3917BF

Test Mode : IEEE 802.11n HT20 CH6 2437TX

	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Amp Factor (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	2437.00	27.60	6.67	34.85	93.92	93.34	74.00	-19.34	Peak
2	3975.00	29.60	10.81	36.42	42.43	46.42	74.00	27.58	Peak
3	4874.00	31.37	12.07	35.76	37.21	44.89	74.00	29.11	Peak
4	7311.00	36.55	11.57	34.12	34.78	48.78	74.00	25.22	Peak
5	8684.00	37.32	11.45	33.66	31.07	46.18	74.00	27.82	Peak
6	13546.00	40.21	11.44	32.61	29.65	48.69	74.00	25.31	Peak

Remarks: 1. Emission Level= Antenna Factor + Cable Loss - Amp Factor + Reading.





Site no. : 1# 966 Chamber Data no. : 33

Dis. / Ant. : 3m ANT 1-18G Ant. pol. : HORIZONTAL

Limit : FCC PART 15C PEAK

Env. / Ins. : Temp:23.6'; Humi:56%; Press:101.52kPa

Engineer : Tony

EUT : 38.5inch HD SMART TV

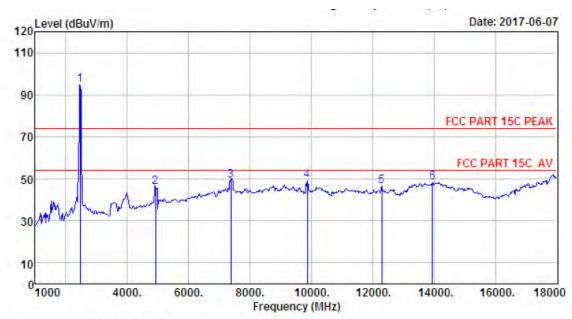
Power : AC 120V/60Hz M/N : ELSW3917BF

Test Mode : IEEE 802.11n HT20 C11 2462TX

	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Amp Factor (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	2462.00	27.58	6.69	34.98	94.95	94.24	74.00	-20.24	Peak
2	3975.00	29.60	10.81	36.42	45.97	49.96	74.00	24.04	Peak
3	4924.00	31.45	12.29	35.91	42.89	50.72	74.00	23.28	Peak
4	7386.00	36.57	11.59	34.23	33.28	47.21	74.00	26.79	Peak
5	8684.00	37.32	11.45	33.66	29.97	45.08	74.00	28.92	Peak
6	11098.00	39.45	11.22	33.64	28.31	45.34	74.00	28.66	Peak

Remarks: 1. Emission Level= Antenna Factor + Cable Loss - Amp Factor + Reading.





Site no. : 1# 966 Chamber Data no. : 34
Dis. / Ant. : 3m ANT 1-18G Ant. pol. : VERTICAL

Limit : FCC PART 15C PEAK

Env. / Ins. : Temp:23.6'; Humi:56%; Press:101.52kPa

Engineer : Tony

EUT : 38.5inch HD SMART TV

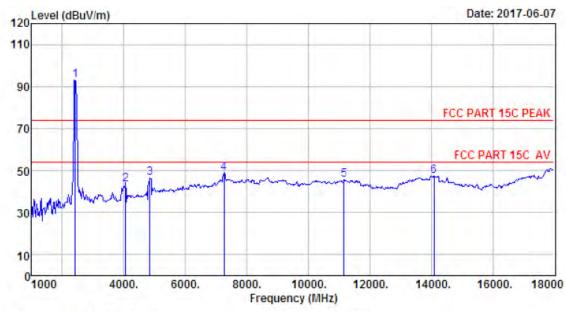
Power : AC 120V/60Hz M/N : ELSW3917BF

Test Mode : IEEE 802.11n HT20 C11 2462TX

	Freq.	Ant. Factor (dB/m)	Cable Loss (dB)	Amp Factor (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	2462.00	27.58	6.69	34.98	95.33	94.62	74.00	-20.62	Peak
2	4924.00	31.45	12.29	35.91	38.08	45.91	74.00	28.09	Peak
3	7386.00	36.57	11.59	34.23	35.09	49.02	74.00	24.98	Peak
4	9874.00	38.15	11.62	35.01	34.20	48.96	74.00	25.04	Peak
5	12305.00	38.70	11.10	33.53	30.09	46.36	74.00	27.64	Peak
6	13954.00	41.35	10.96	32.99	29.11	48.43	74.00	25.57	Peak

Remarks: 1. Emission Level= Antenna Factor + Cable Loss - Amp Factor + Reading.





Dis. / Ant. : 3m ANT 1-18G Ant. pol. : HORIZONTAL

Limit : FCC PART 15C PEAK

Env. / Ins. : Temp:23.6'; Humi:56%; Press:101.52kPa

Engineer : Tony

EUT : 38.5inch HD SMART TV

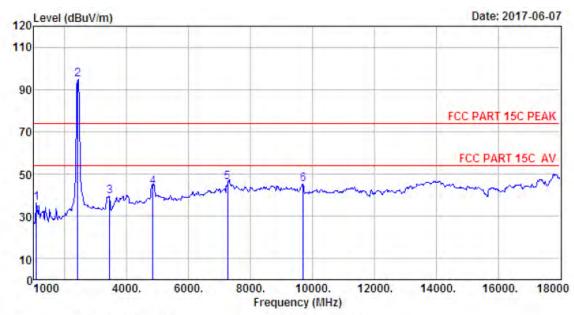
Power : AC 120V/60Hz M/N : ELSW3917BF

Test Mode : IEEE 802.11n HT40 CH3 2422TX

	Freq.	Ant. Factor (dB/m)	Cable Loss (dB)	Amp Factor (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	2422.00	27.60	6.66	34.74	93.59	93.11	74.00	-19.11	Peak
2	4060.00	29.77	10.83	36.18	38.96	43.38	74.00	30.62	Peak
3	4844.00	31.31	11.92	35.68	39.07	46.62	74.00	27.38	Peak
4	7266.00	36.54	11.56	34.05	34.80	48.85	74.00	25.15	Peak
5	11166.00	39.41	11.17	33.31	28.35	45.62	74.00	28.38	Peak
6	14090.00	41.54	10.91	33.13	28.28	47.60	74.00	26,40	Peak

Remarks: 1. Emission Level= Antenna Factor + Cable Loss - Amp Factor + Reading.





: 1# 966 Chamber Site no. Data no. : 36 : 3m ANT 1-18G : FCC PART 15C PEAK Dis. / Ant. Ant. pol. : VERTICAL

Limit

Env. / Ins. : Temp:23.6'; Humi:56%; Press:101.52kPa

: Tony Engineer

EUT : 38.5inch HD SMART TV

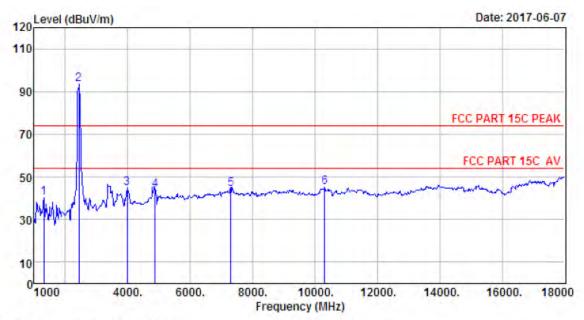
Power : AC 120V/60Hz : ELSW3917BF M/N

: IEEE 802.11n HT40 CH3 2422TX Test Mode

	Freq.	Ant. Factor (dB/m)	Cable Loss (dB)	Amp Factor (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	1085.00	24.15	3.59	35.31	43.68	36.11	74.00	37.89	Peak
2	2422.00	27.60	6.66	34.74	95.45	94.97	74.00	-20.97	Peak
3	3448.00	28.18	8.73	36.21	38.89	39.59	74.00	34.41	Peak
4	4844.00	31.31	11.92	35.68	36.10	43.65	74.00	30.35	Peak
5	7266.00	36.54	11.56	34.05	32.11	46.16	74.00	27.84	Peak
6	9704.00	38.06	11.66	35.10	30.68	45.30	74.00	28.70	Peak

Remarks: 1. Emission Level= Antenna Factor + Cable Loss - Amp Factor + Reading.





Dis. / Ant, : 3m ANT 1-18G Ant, pol. : HORIZONTAL

Limit : FCC PART 15C PEAK

Env. / Ins. : Temp:23.6'; Humi:56%; Press:101.52kPa

Engineer : Tony

EUT : 38.5inch HD SMART TV

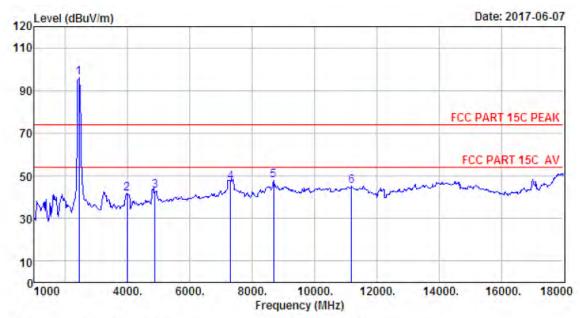
Power : AC 120V/60Hz M/N : ELSW3917BF

Test Mode : IEEE 802.11n HT40 CH6 2437TX

	Freq.	Ant. Factor (dB/m)	Cable Loss (dB)	Amp Factor (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	1306.00	25.02	3.99	34.88	46.25	40.38	74.00	33.62	Peak
2	2437.00	27.60	6.67	34.85	93.87	93.29	74.00	-19.29	Peak
3	3975.00	29.60	10.81	36.42	40.87	44.86	74.00	29.14	Peak
4	4874.00	31.37	12.07	35.76	36.11	43.79	74.00	30.21	Peak
5	7311.00	36.55	11.57	34.12	30.32	44.32	74.00	29.68	Peak
6	10316.00	38.65	11.41	34.51	29.40	44.95	74.00	29.05	Peak

Remarks: 1. Emission Level= Antenna Factor + Cable Loss - Amp Factor + Reading.





Site no. : 1# 966 Chamber Data no. : 38
Dis. / Ant. : 3m ANT 1-18G Ant. pol. : VERTICAL

Limit : FCC PART 15C PEAK

Env. / Ins. : Temp:23.6'; Humi:56%; Press:101.52kPa

Engineer : Tony

EUT : 38.5inch HD SMART TV

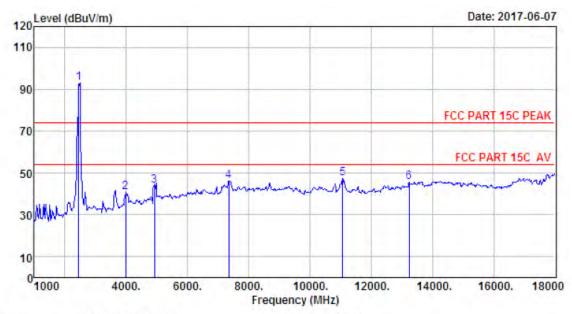
Power : AC 120V/60Hz M/N : ELSW3917BF

Test Mode : IEEE 802.11n HT40 CH6 2437TX

		Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Amp Factor (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
-	1	2437.00	27.60	6.67	34.85	96.70	96.12	74.00	-22.12	Peak
	2	3975.00	29.60	10.81	36.42	37.63	41.62	74.00	32.38	Peak
	3	4874.00	31.37	12,07	35.76	35.46	43.14	74.00	30.86	Peak
	4	7311.00	36.55	11.57	34.12	32.93	46.93	74.00	27.07	Peak
	5	8684.00	37.32	11.45	33.66	32.53	47.64	74.00	26.36	Peak
	6	11200.00	39.39	11.14	33.24	28.04	45.33	74.00	28.67	Peak

Remarks: 1. Emission Level= Antenna Factor + Cable Loss - Amp Factor + Reading.





: 1# 966 Chamber Site no. Data no. : 39 Dis. / Ant. : 3m ANT 1-18G Limit : FCC PART 15C PEAK Ant, pol, : VERTICAL

Env. / Ins. : Temp:23.6'; Humi:56%; Press:101.52kPa

Engineer : Tony

EUT : 38.5inch HD SMART TV

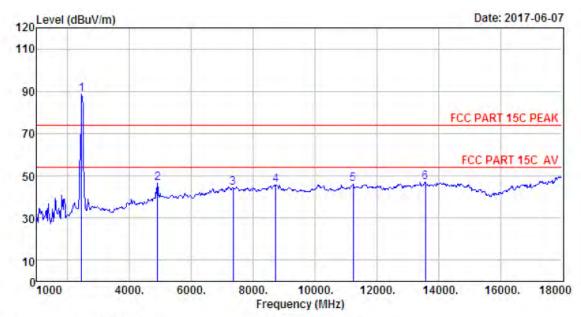
Power : AC 120V/60Hz : ELSW3917BF M/N

Test Mode : IEEE 802.11n HT40 CH9 2452TX

	Freq.	Ant. Factor (dB/m)	Cable Loss (dB)	Amp Factor (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	2452.00	27.59	6.67	34.85	93.50	92.91	74.00	-18.91	Peak
2	3975.00	29.60	10.81	36.42	36.82	40.81	74.00	33.19	Peak
3	4924.00	31.45	12.29	35.91	36.10	43.93	74.00	30.07	Peak
4	7356.00	36.56	11.58	34.19	32.11	46.06	74.00	27.94	Peak
5	11064.00	39.48	11.24	33.83	30.40	47.29	74.00	26.71	Peak
6	13240.00	39.46	11.46	32.88	27.73	45.77	74.00	28,23	Peak

Remarks: 1. Emission Level= Antenna Factor + Cable Loss - Amp Factor + Reading.





: 1# 966 Chamber Site no. Data no. : 40

Dis. / Ant. : 3m ANT 1-18G Ant. pol Limit : FCC PART 15C PEAK Env. / Ins. : Temp:23.6'; Humi:56%; Press:101.52kPa Ant. pol. : HORIZONTAL

: Tony Engineer

: 38.5inch HD SMART TV EUT

Power : AC 120V/60Hz M/N : ELSW3917BF

: IEEE 802.11n HT40 CH9 2452TX Test Mode

	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Amp Factor (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	2452.00	27.59	6.67	34.85	89.03	88.44	74.00	-14.44	Peak
2	4904.00	31.42	12.22	35.87	38.93	46.70	74.00	27.30	Peak
3	7356.00	36.56	11.58	34.19	30.20	44.15	74.00	29.85	Peak
4	8735.00	37.40	11.45	33.76	30.52	45.61	74.00	28.39	Peak
5	11234.00	39.37	11.12	33.25	28.89	46.13	74.00	27.87	Peak
6	13580.00	40.31	11.40	32.64	27.93	47.00	74.00	27.00	Peak

Remarks: 1. Emission Level= Antenna Factor + Cable Loss - Amp Factor + Reading.



18000MHz - 25000MHz

Pass

Note: The amplitude of spurious emission that is attenuated by more than 20dB below the permissible limit has no need to be reported.



5 BAND EDGE COMPLIANCE TEST

5.1 Limit

All the lower and upper band-edges emissions appearing within 2310MHz to 2390MHz and 2483.5MHz to 2500MHz restricted frequency bands shall not exceed the limits shown in 15.209, all the other emissions outside operation frequency band 2400MHz to 2483.5MHz shall be at least 20dB below the fundamental emissions, or comply with 15.209 limits

5.2 Test Procedure

- 1. The EUT is placed on a turntable, which is 1.5m above the ground plane and worked at highest radiated power.
- 2. The turntable was rotated for 360 degrees to determine the position of maximum emission level.
- 3. EUT is set 3m away from the receiving antenna, which is varied from 1m to 4m to find out the highest emission.
- 4. Set the spectrum analyzer in the following setting in order to capture the lower and upper band-edges of the emission:
- (a) Peak: RBW = 1MHz, VBW = 1MHz, Detector=PEAK detector, Sweep time = auto (b) AV: RBW = 1MHz, VBW = 10Hz, Detector=PEAK detector, Sweep time = auto

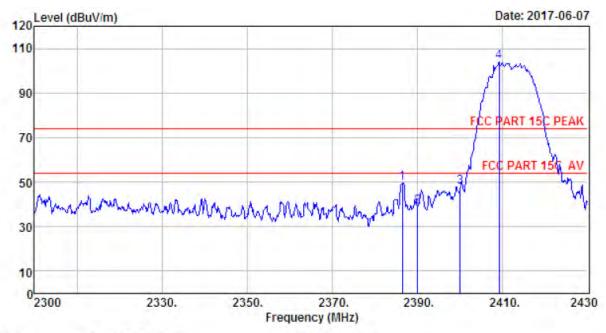
5.3 Test Result

Pass (The testing data was attached in the next pages.)

- Note: 1. For emissions above 1GHz, if peak level comply with average limit, then the average level is deemed to comply with average limit.
 - 2. The frequency 2412MHz. 2422MHz . 2452MHz and 2462 MHz is fundamental frequency which no limit, the limit on plots is automatically generated by the software, it's not fundamental limit, we can't remove it.



5.4 Test Data



Site no. : 1# 966 Chamber Data no. : 41

Dis. / Ant. : 3m ANT 1-18G Ant. pol. : HORIZONTAL

Limit : FCC PART 15C PEAK

Env. / Ins. : Temp:23.6'; Humi:56%; Press:101.52kPa

Engineer : Tony

EUT : 38.5inch HD SMART TV

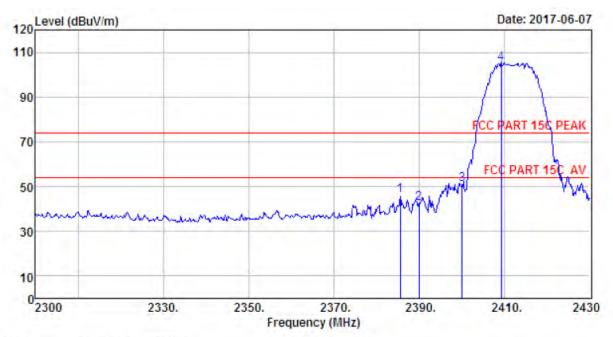
Power : AC 120V/60Hz M/N : ELSW3917BF

Test Mode : IEEE 802.11b CH1 2412TX

	Freq.	Ant. Factor (dB/m)	Cable Loss (dB)	Amp Factor (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	2386.45	27.64	6.62	34.62	49.99	49.63	74.00	24.37	Peak
2	2390.00	27.64	6.62	34.62	39.48	39.12	74.00	34.88	Peak
3	2400.00	27.61	6.62	34.64	48.22	47.81	74.00	26.19	Peak
4	2409.20	27.60	6.64	34.64	104.28	103.88	74.00	-29.88	Peak

Remarks: 1. Emission Level= Antenna Factor + Cable Loss - Amp Factor + Reading.





Site no. : 1# 966 Chamber Data no. : 42
Dis. / Ant. : 3m ANT 1-18G Ant. pol. : VERTICAL

Limit : FCC PART 15C PEAK

Env. / Ins. : Temp:23.6'; Humi:56%; Press:101.52kPa

Engineer : Tony

EUT : 38.5inch HD SMART TV

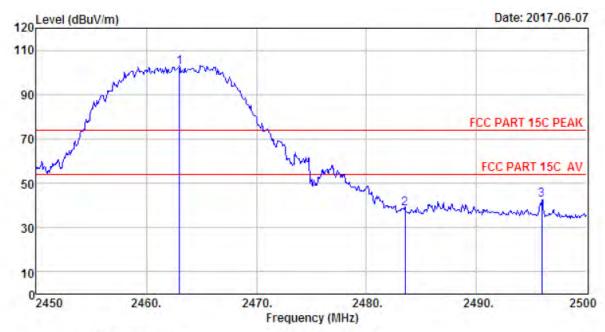
Power : AC 120V/60Hz M/N : ELSW3917BF

Test Mode : IEEE 802.11b CH1 2412TX

	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Amp Factor (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	2385.54	27.64	6.62	34.62	46.43	46.07	74.00	27.93	Peak
2	2389.96	27.64	6.62	34.62	42.68	42.32	74.00	31.68	Peak
3	2400.00	27.61	6.62	34.64	51.17	50.76	74.00	23.24	Peak
4	2409.20	27.60	6.64	34.64	105.23	104.83	74.00	-30.83	Peak

Remarks: 1. Emission Level= Antenna Factor + Cable Loss - Amp Factor + Reading.





Site no. : 1# 966 Chamber Data no. : 43
Dis. / Ant. : 3m ANT 1-18G Ant. pol. : VERTICAL

Limit : FCC PART 15C PEAK

Env. / Ins. : Temp:23.6'; Humi:56%; Press:101.52kPa

Engineer : Tony

EUT : 38.5inch HD SMART TV

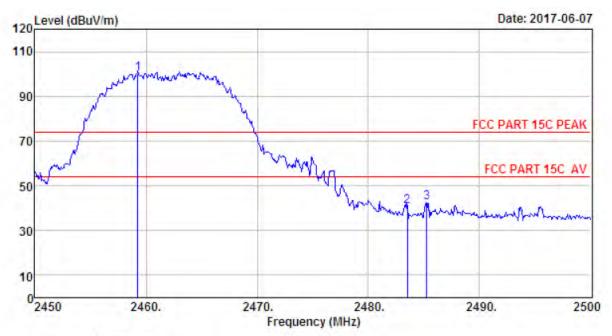
Power : AC 120V/60Hz M/N : ELSW3917BF

Test Mode : IEEE 802.11b CH11 2462TX

	Freq.	Ant. Factor (dB/m)	Cable Loss (dB)	Amp Factor (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	2463.00	27.58	6.69	34.98	102.93	102.22	74.00	-28.22	Peak
2	2483.50	27.58	6.71	35.11	39.24	38.42	74.00	35.58	Peak
3	2495.90	27.57	6.73	35.24	43.58	42.64	74.00	31.36	Peak

Remarks: 1. Emission Level= Antenna Factor + Cable Loss - Amp Factor + Reading.





Data no. : 44

Site no. : 1# 966 Chamber Dis. / Ant. : 3m ANT 1-18G Limit : FCC PART 15C PEAK Ant. pol. : HORIZONTAL

Env. / Ins. : Temp:23.6'; Humi:56%; Press:101.52kPa

Engineer : Tony

: 38.5inch HD SMART TV EUT

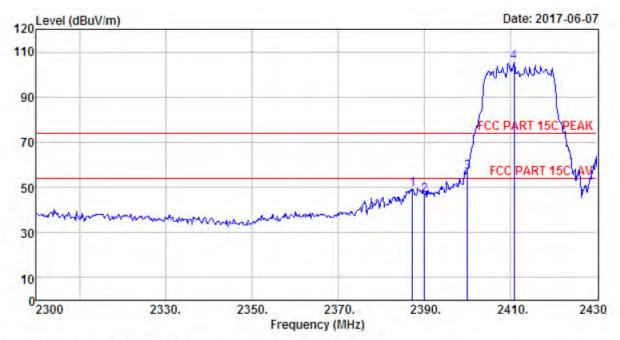
Power : AC 120V/60Hz : ELSW3917BF M/N

Test Mode : IEEE 802.11b CH11 2462TX

	Freq.	Ant. Factor (dB/m)	Cable Loss (dB)	-	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	2459.25	27.59	6.69	34.98	100.90	100.20	74.00	-26,20	Peak
2	2483.50	27.58	6.71	35.11	41.65	40.83	74.00	33.17	Peak
3	2485.25	27.58	6.71	35.11	43.47	42.65	74.00	31.35	Peak

Remarks: 1. Emission Level= Antenna Factor + Cable Loss - Amp Factor + Reading.





Dis. / Ant. : 3m ANT 1-18G Ant. pol. : HORIZONTAL

Limit : FCC PART 15C PEAK

Env. / Ins. : Temp:23.6'; Humi:56%; Press:101.52kPa

Engineer : Tony

EUT : 38.5inch HD SMART TV

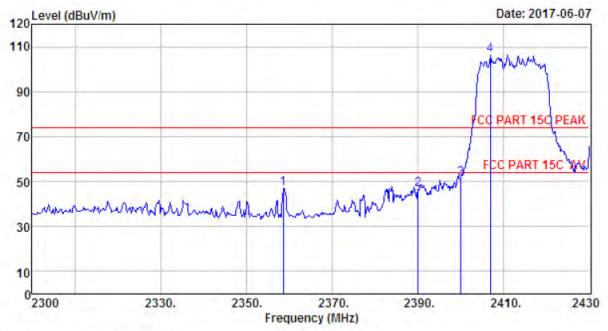
Power : AC 120V/60Hz M/N : ELSW3917BF

Test Mode : IEEE 802.11g CH1 2412TX

	Freq.	Ant. Factor (dB/m)	Cable Loss (dB)	Amp Factor (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	2387.23	27.64	6.62	34.62	49.71	49.35	74.00	24.65	Peak
2	2390.00	27.64	6.62	34.62	46.83	46.47	74.00	27.53	Peak
3	2400.00	27.61	6.62	34.64	56.89	56.48	74.00	17.52	Peak
4	2410.76	27.60	6.64	34.64	105.64	105.24	74.00	-31.24	Peak

Remarks: 1. Emission Level= Antenna Factor + Cable Loss - Amp Factor + Reading.





Site no. : 1# 966 Chamber Data no. : 46
Dis. / Ant. : 3m ANT 1-18G Ant. pol. : VERTICAL

Limit : FCC PART 15C PEAK

Env. / Ins. : Temp:23.6'; Humi:56%; Press:101.52kPa

Engineer : Tony

EUT : 38.5inch HD SMART TV

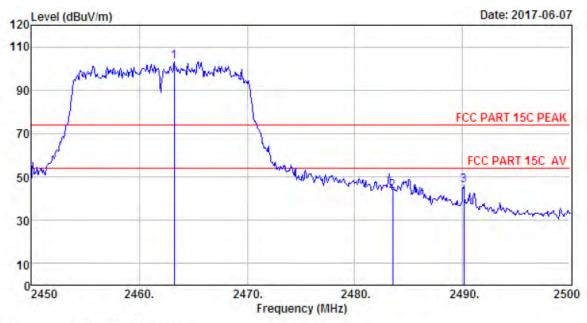
Power : AC 120V/60Hz M/N : ELSW3917BF

Test Mode : IEEE 802.11g CH1 2412TX

	Freq.	Ant. Factor (dB/m)	Cable Loss (dB)	Amp Factor (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	2358.50	27.67	6.58	34.57	47.18	46.86	74.00	27.14	Peak
2	2390.00	27.64	6.62	34.62	46.79	46.43	74.00	27.57	Peak
3	2400.00	27.61	6.62	34.64	51.89	51.48	74.00	22.52	Peak
4	2406.86	27.61	6.64	34.64	106.59	106.20	74.00	-32.20	Peak

Remarks: 1. Emission Level= Antenna Factor + Cable Loss - Amp Factor + Reading.





Data no. : 47

Site no. : 1# 966 Chamber Dis. / Ant. : 3m ANT 1-18G Ant. pol. : HORIZONTAL

: FCC PART 15C PEAK Limit

Env. / Ins. : Temp:23.6'; Humi:56%; Press:101.52kPa

Engineer : Tony

EUT : 38.5inch HD SMART TV

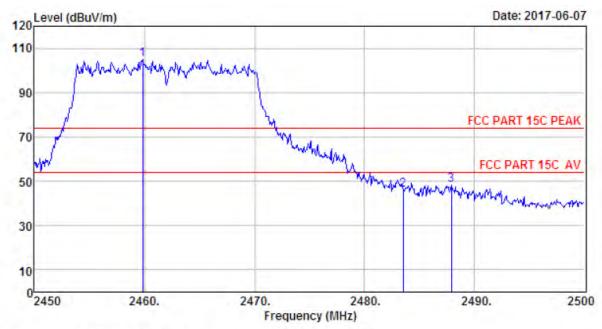
Power : AC 120V/60Hz : ELSW3917BF M/N

: IEEE 802.11g CH11 2462TX Test Mode

	Freq.	Ant. Factor (dB/m)	Cable Loss (dB)	Amp Factor (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	2463.25	27.58	6.69	34.98	103.76	103.05	74.00	-29.05	Peak
2	2483.50	27.58	6.71	35.11	44.30	43.48	74.00	30.52	Peak
3	2490.10	27.58	6.73	35.24	46.79	45.86	74.00	28.14	Peak
3	2490.10	27.58	6.73	35.24	46.79	45.86	74.00	28.14	Pea

Remarks: 1. Emission Level= Antenna Factor + Cable Loss - Amp Factor + Reading.





Site no. : 1# 966 Chamber Data no. : 48
Dis. / Ant. : 3m ANT 1-18G Ant. pol. : VERTICAL

Limit : FCC PART 15C PEAK

Env. / Ins. : Temp:23.6'; Humi:56%; Press:101.52kPa

Engineer : Tony

EUT : 38.5inch HD SMART TV

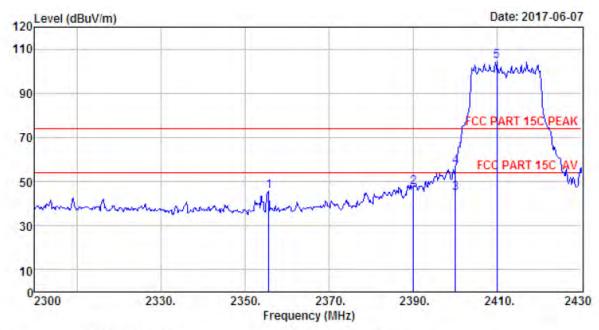
Power : AC 120V/60Hz M/N : ELSW3917BF

Test Mode : IEEE 802.11g CH11 2462TX

	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	-	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	2459.85	27.58	6.69	34.98	105.87	105.16	74.00	-31.16	Peak
2	2483.50	27.58	6.71	35.11	46.88	46.06	74.00	27.94	Peak
3	2487.90	27.58	6.73	35.11	48.89	48.09	74.00	25.91	Peak

Remarks: 1. Emission Level= Antenna Factor + Cable Loss - Amp Factor + Reading.





Dis. / Ant. : 3m ANT 1-18G Ant. pol. : HORIZONTAL

Limit : FCC PART 15C PEAK

Env. / Ins. : Temp:23.6'; Humi:56%; Press:101.52kPa

Engineer : Tony

EUT : 38.5inch HD SMART TV

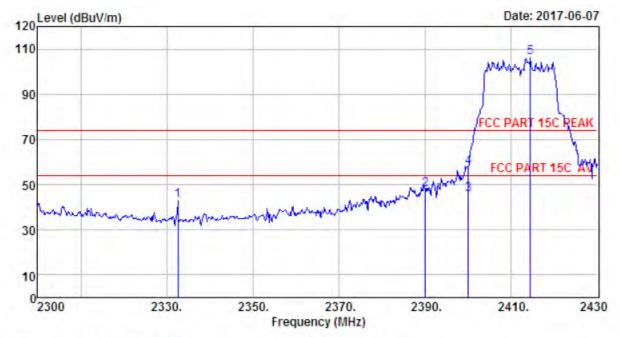
Power : AC 120V/60Hz M/N : ELSW3917BF

Test Mode : IEEE 802.11n HT20 CH1 2412TX

	Freq.	Ant. Factor (dB/m)	Cable Loss (dB)	Amp Factor (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	2355.64	27.70	6.58	34.57	45.97	45.68	74.00	28,32	Peak
2	2390.00	27.64	6.62	34.62	47.73	47.37	74.00	26.63	Peak
.3	2400.00	27.61	6.62	34.64	45.00	44.59	54.00	9.41	Average
4	2400.00	27.61	6.62	34.64	57.20	56.79	74.00	17.21	Peak
5	2409.85	27.60	6.64	34.64	104.91	104.51	74.00	-30.51	Peak

Remarks: 1. Emission Level= Antenna Factor + Cable Loss - Amp Factor + Reading.





Dis. / Ant. : 3m ANT 1-18G Ant. pol. : VERTICAL

Limit : FCC PART 15C PEAK

Env. / Ins. : Temp:23.6'; Humi:56%; Press:101.52kPa

Engineer : Tony

EUT : 38.5inch HD SMART TV

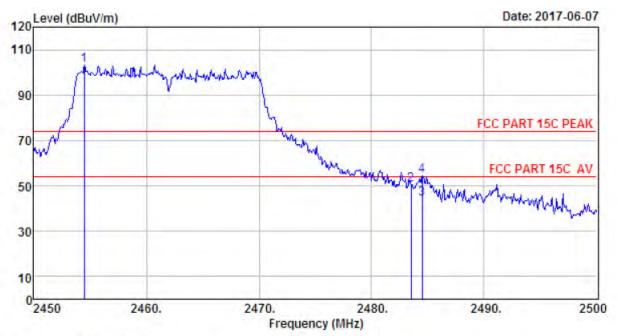
Power : AC 120V/60Hz M/N : ELSW3917BF

Test Mode : IEEE 802.11n HT20 CH1 2412TX

	Freq.	Ant. Factor (dB/m)	Cable Loss (dB)	Amp Factor (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	2332.50	27.73	6.54	34.59	43.32	43.00	74.00	31,00	Peak
2	2390.00	27.64	6.62	34.62	48.27	47.91	74.00	26.09	Peak
3	2400.00	27.61	6.62	34.64	46.00	45.59	54.00	8.41	Average
4	2400.00	27.61	6.62	34.64	57.86	57.45	74.00	16.55	Peak
5	2414.40	27.60	6.64	34.64	106.47	106.07	74.00	-32.07	Peak

Remarks: 1. Emission Level= Antenna Factor + Cable Loss - Amp Factor + Reading.





Site no. : 1# 966 Chamber Data no. : 51
Dis. / Ant. : 3m ANT 1-18G Ant. pol. : VERTICAL

Limit : FCC PART 15C PEAK

Env. / Ins. : Temp:23.6'; Humi:56%; Press:101.52kPa

Engineer : Tony

EUT : 38.5inch HD SMART TV

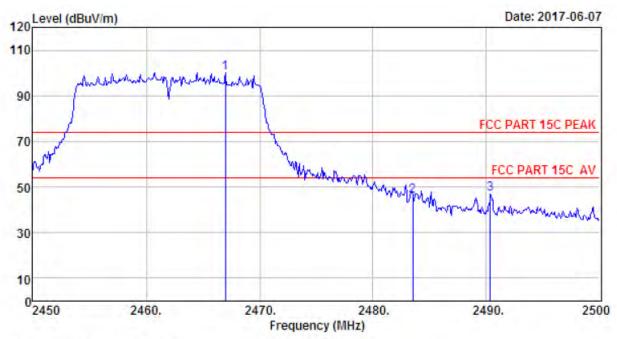
Power : AC 120V/60Hz M/N : ELSW3917BF

Test Mode : IEEE 802.11n HT20 C11 2462TX

	Freq.	Ant. Factor (dB/m)	Cable Loss (dB)	Amp Factor (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	2454.50	27.59	6.69	34.98	103.93	103.23	74.00	-29.23	Peak
2	2483.50	27.58	6.71	35.11	51.50	50.68	74.00	23.32	Peak
3	2484.50	27.58	6.71	35.11	45.25	44.43	54.00	9.57	Average
4	2484.50	27.58	6.71	35.11	55.25	54.43	74.00	19.57	Peak

Remarks: 1. Emission Level= Antenna Factor + Cable Loss - Amp Factor + Reading.





Dis. / Ant. : 3m ANT 1-18G Ant. pol. : HORIZONTAL

Limit : FCC PART 15C PEAK

Env. / Ins. : Temp:23.6'; Humi:56%; Press:101.52kPa

Engineer : Tony

EUT : 38.5inch HD SMART TV

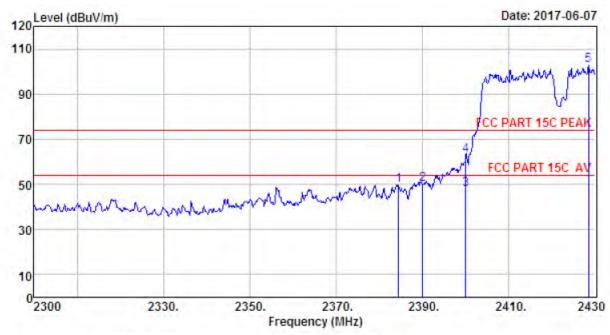
Power : AC 120V/60Hz M/N : ELSW3917BF

Test Mode : IEEE 802.11n HT20 C11 2462TX

	Freq.	Ant. Factor (dB/m)	Cable Loss (dB)	Amp Factor (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	2467.00	27.58	6.69	34.98	100.78	100.07	74.00	-26.07	Peak
2	2483.50	27.58	6.71	35.11	46.72	45.90	74.00	28.10	Peak
3	2490.35	27.58	6.73	35.24	48.07	47.14	74.00	26.86	Peak

Remarks: 1. Emission Level= Antenna Factor + Cable Loss - Amp Factor + Reading.





Site no. : 1# 966 Chamber Data no. : 53
Dis. / Ant. : 3m ANT 1-18G Ant. pol. : VERTICAL

Limit : FCC PART 15C PEAK

Env. / Ins. : Temp:23.6'; Humi:56%; Press:101.52kPa

Engineer : Tony

EUT : 38.5inch HD SMART TV

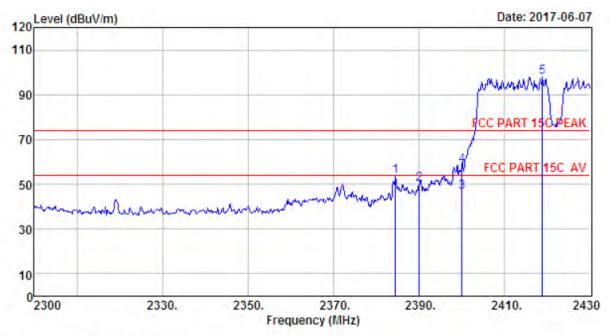
Power : AC 120V/60Hz M/N : ELSW3917BF

Test Mode : IEEE 802.11n HT40 CH3 2422TX

	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Amp Factor (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	2384.50	27.64	6.60	34.62	50.09	49.71	74.00	24.29	Peak
2	2390.00	27.64	6.62	34.62	50.30	49.94	74.00	24.06	Peak
3	2400.00	27.61	6.62	34.64	48.32	47.91	54.00	6.09	Average
4	2400.00	27.61	6.62	34.64	63.32	62.91	74.00	11.09	Peak
5	2428.44	27.60	6.66	34.74	103.39	102.91	74.00	-28.91	Peak

Remarks: 1. Emission Level= Antenna Factor + Cable Loss - Amp Factor + Reading.





Site no. : 1# 966 Chamber

Data no. : 54 Ant. pol. : HORIZONTAL Dis. / Ant. : 3m ANT 1-18G

: FCC PART 15C PEAK

: Temp:23.6'; Humi:56%; Press:101.52kPa Env. / Ins.

Engineer : Tony

: 38.5inch HD SMART TV EUT

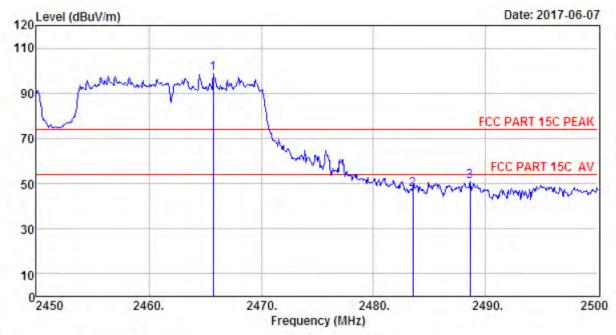
: AC 120V/60Hz Power M/N : ELSW3917BF

: IEEE 802.11n HT40 CH3 2422TX Test Mode

. Contract	Freq.	Ant. Factor (dB/m)	Cable Loss (dB)	Amp Factor (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	2384,50	27.64	6.60	34.62	53.92	53.54	74.00	20.46	Peak
2	2390.00	27.64	6.62	34.62	50.34	49.98	74.00	24.02	Peak
3	2400.00	27.61	6.62	34.64	46.82	46.41	54.00	7.59	Average
4	2400.00	27.61	6,62	34.64	58.82	58.41	74.00	15.59	Peak
5	2418.82	27.60	6.64	34.74	98.36	97.86	74.00	-23.86	Peak
5	2418.82	27.60	6.64	34.74	98.36	97.86	74.00	-23.86	1

Remarks: 1. Emission Level= Antenna Factor + Cable Loss - Amp Factor + Reading.





Dis. / Ant. : 3m ANT 1-18G Ant. pol. : HORIZONTAL

Limit : FCC PART 15C PEAK

Env. / Ins. : Temp:23.6'; Humi:56%; Press:101.52kPa

Engineer : Tony

EUT : 38.5inch HD SMART TV

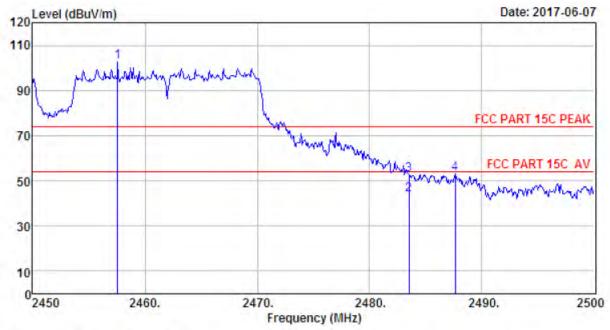
Power : AC 120V/60Hz M/N : ELSW3917BF

Test Mode : IEEE 802.11n HT40 CH9 2452TX

	Freq.	Ant. Factor (dB/m)	Cable Loss (dB)	Amp Factor (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	2465.75	27.58	6.69	34.98	99.45	98.74	74.00	-24.74	Peak
2	2483,50	27.58	6.71	35.11	48.30	47.48	74.00	26.52	Peak
3	2488.60	27.58	6.73	35.11	51.90	51.10	74.00	22.90	Peak

Remarks: 1. Emission Level= Antenna Factor + Cable Loss - Amp Factor + Reading.





Site no. : 1# 966 Chamber Data no. : 56
Dis. / Ant. : 3m ANT 1-18G Ant. pol. : VERTICAL

Limit : FCC PART 15C PEAK

Env. / Ins. : Temp:23.6'; Humi:56%; Press:101.52kPa

Engineer : Tony

EUT : 38,5inch HD SMART TV

Power : AC 120V/60Hz M/N : ELSW3917BF

Test Mode : IEEE 802.11n HT40 CH9 2452TX

	Freq.	Ant. Factor (dB/m)	Cable Loss (dB)	Amp Factor (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	2457.55	27.59	6.69	34.98	103.49	102.79	74.00	-28.79	Peak
2	2483.50	27.58	6.71	35.11	44.71	43.89	54.00	10.11	Average
3	2483.50	27.58	6.71	35.11	53.71	52.89	74.00	21.11	Peak
4	2487.60	27.58	6.73	35.11	53.83	53.03	74.00	20.97	Peak

Remarks: 1. Emission Level= Antenna Factor + Cable Loss - Amp Factor + Reading.



6 6dB & 20dB Bandwidth Test

6.1 Limit

For direct sequence systems, the minimum 6dB bandwidth shall be at least 500kHz

6.2 Test Procedure

- 1, Connected the EUT's antenna port to spectrum analyzer device.
- 2, Follow the test procedure as described in KDB 558074
 - (1). Set resolution bandwidth (RBW) = 100 kHz.
 - (2). Set the video bandwidth (VBW) $\geq 3 \times RBW$.
 - (3). Detector = Peak.
 - (4). Trace mode = max hold.
 - (5). Sweep = auto couple.
 - (6). Allow the trace to stabilize.
 - (7). Measure the maximum width of the emission that is constrained by the frequencies associated with the two outermost amplitude points (upper and lower) that are attenuated by 6 dB relative to the maximum level measured in the fundamental emission.

6.3 Test Result

EUT: 38.5inch HD S	SMART TV		
M/N: ELSW3917BF	7		
Test date: 2017-06-0	8	Tested by: Tony.Tang	Test site: RF Site
Test Mode	СН	6dB bandwidth (MHz)	Limit (KHz)
	CH1	10.028	>500
IEEE 802.11 b	СН6	9.939	>500
	CH11	9.819	>500
	CH1	16.503	>500
IEEE 802.11 g	CH6	16.529	>500
	CH11	16.505	>500
IEEE 900 11	CH1	16.528	>500
IEEE 802.11 n HT 20	CH6	16.419	>500
111 20	CH11	16.518	>500
IEEE 900 11	CH3	36.441	>500
IEEE 802.11 n HT 40	CH6	36.178	>500
111 40	CH9	36.404	>500
Conclusion: PASS			



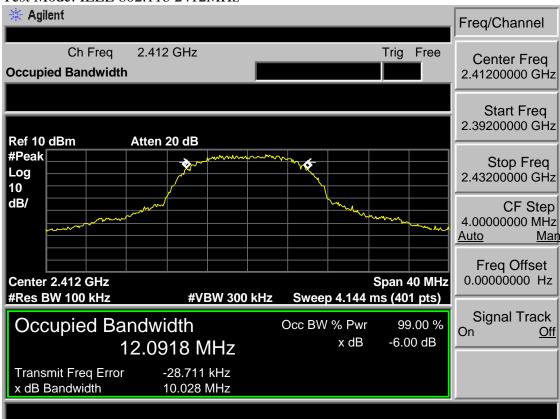
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EUT: 38.5inch HD	SMART TV		
M/N: ELSW3917BI	7		
Test date: 2017-06-0)8	Tested by: Tony.Tang	Test site: RF Site
Test Mode	СН	20dB bandwidth (MHz)	Limit (KHz)
	CH1	14.054	/
IEEE 802.11 b	СН6	14.075	/
	CH11	13.981	/
	CH1	18.308	/
IEEE 802.11 g	CH6	18.136	/
	CH11	18.349	/
IEEE 000 11	CH1	18.623	/
IEEE 802.11 n HT 20	CH6	18.795	/
111 20	CH11	18.892	/
IEEE 902 11	CH3	40.469	/
IEEE 802.11 n HT 40	CH6	40.322	/
111 40	CH9	40.077	/

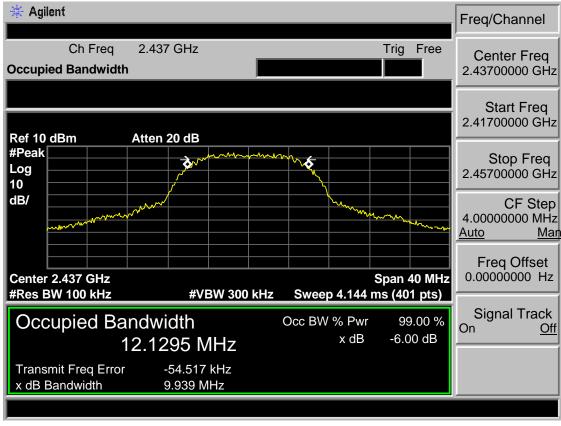


6.4 6dB Test Data

Test Mode: IEEE 802.11b 2412MHz



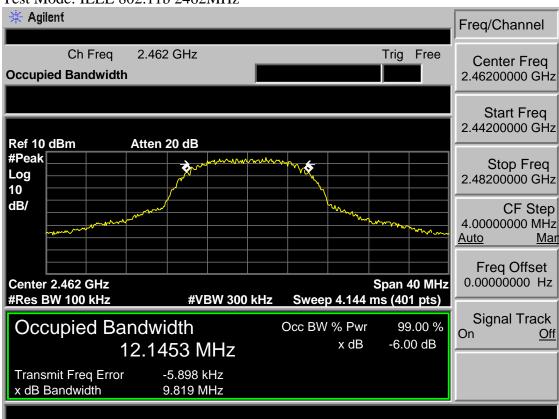
Test Mode: IEEE 802.11b 2437MHz



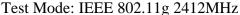


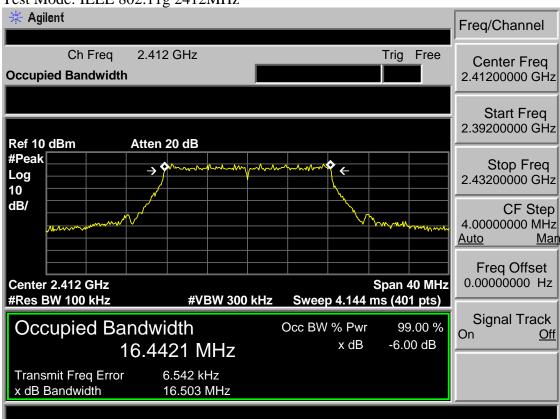
EST Technology Co., Ltd

Test Mode: IEEE 802.11b 2462MHz

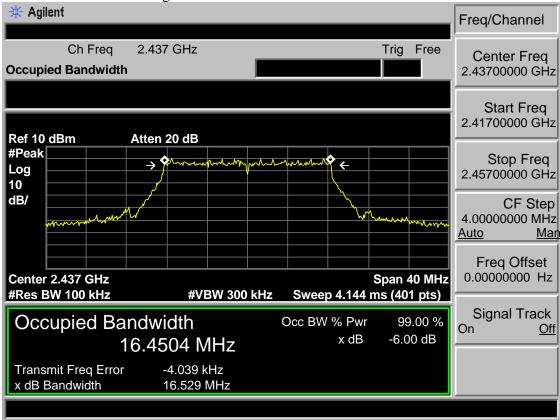




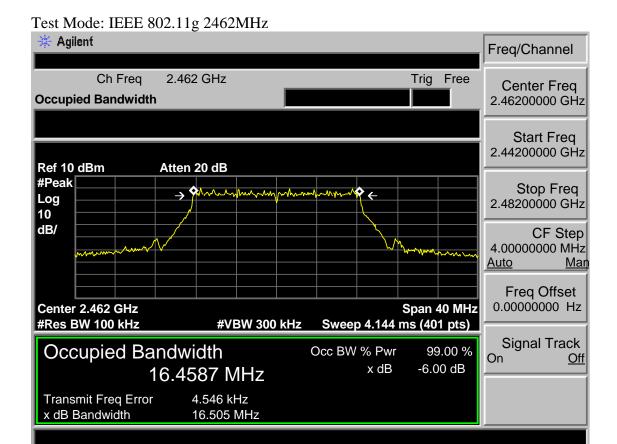




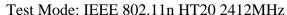
Test Mode: IEEE 802.11g 2437MHz

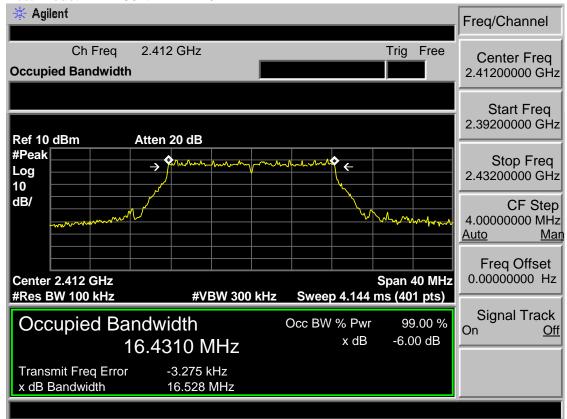




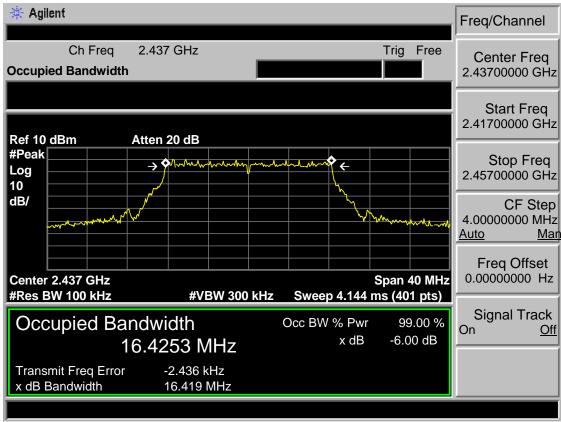






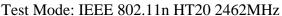


Test Mode: IEEE 802.11n HT20 2437MHz

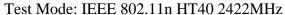


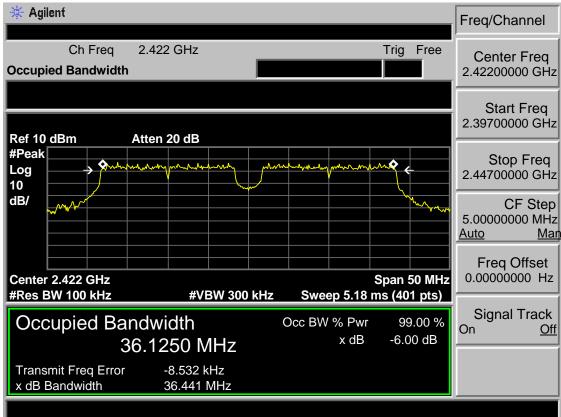


Agilent Freq/Channel Trig Free Ch Freq 2.462 GHz Center Freq **Occupied Bandwidth** 2.46200000 GHz Start Freq 2.44200000 GHz Ref 10 dBm Atten 20 dB #Peak Stop Freq 2.48200000 GHz Log 10 dB/ CF Step 4.00000000 MHz Man <u>Auto</u> Freq Offset 0.00000000 Hz Center 2.462 GHz Span 40 MHz #Res BW 100 kHz **#VBW 300 kHz** Sweep 4.144 ms (401 pts) Signal Track Occupied Bandwidth Occ BW % Pwr 99.00 % On Off x dB -6.00 dB 16.4394 MHz Transmit Freq Error -3.431 kHz x dB Bandwidth 16.518 MHz

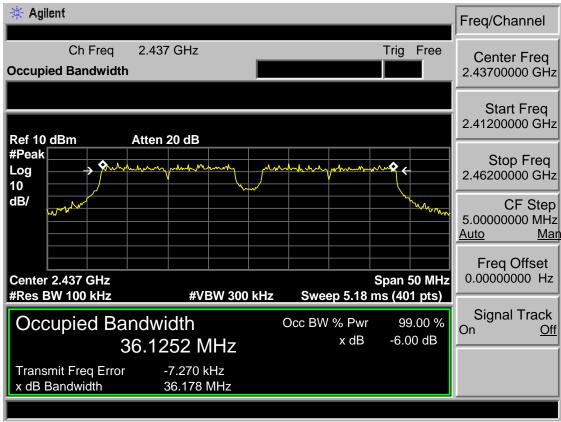






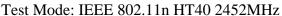


Test Mode: IEEE 802.11n HT40 2437MHz





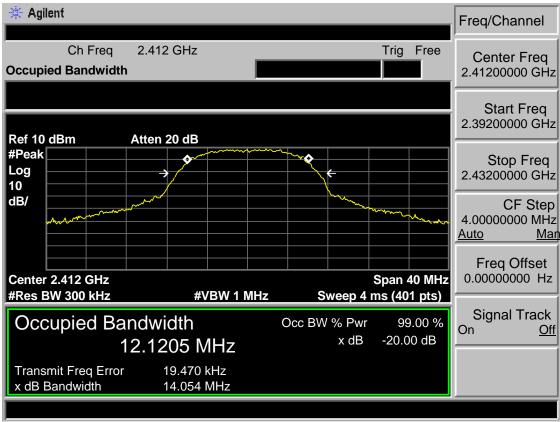
Agilent Freq/Channel Trig Free Ch Freq 2.452 GHz Center Freq **Occupied Bandwidth** 2.45200000 GHz Start Freq 2.42700000 GHz Ref 10 dBm Atten 20 dB #Peak Stop Freq 2.47700000 GHz Log 10 dB/ CF Step 5.00000000 MHz Man <u>Auto</u> Freq Offset 0.00000000 Hz Center 2.452 GHz Span 50 MHz #Res BW 100 kHz **#VBW 300 kHz** Sweep 5.18 ms (401 pts) Signal Track Occupied Bandwidth Occ BW % Pwr 99.00 % On Off x dB -6.00 dB 36.2072 MHz Transmit Freq Error -26.380 kHz x dB Bandwidth 36.404 MHz



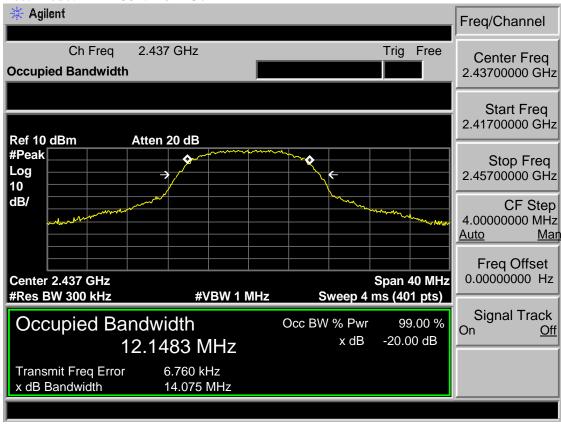


6.5 20dB Test Data

Test Mode: IEEE 802.11b 2412MHz



Test Mode: IEEE 802.11b 2437MHz

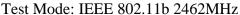




EST Technology Co., Ltd Report No. ESTE-R11706057

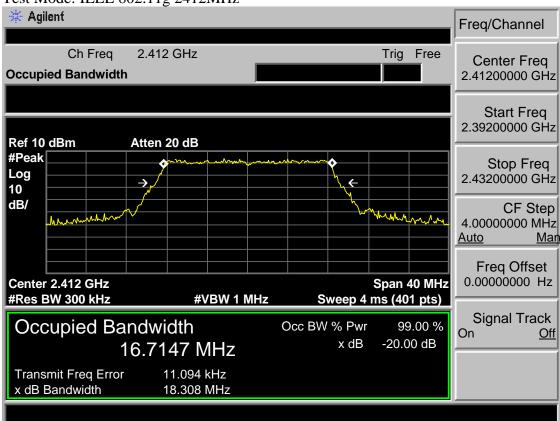
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Agilent Freq/Channel Trig Free Ch Freq 2.462 GHz Center Freq **Occupied Bandwidth** 2.46200000 GHz Start Freq 2.44200000 GHz Ref 10 dBm Atten 20 dB #Peak Stop Freq 2.48200000 GHz Log 10 dB/ CF Step 4.00000000 MHz Man <u>Auto</u> Freq Offset 0.00000000 Hz Center 2.462 GHz Span 40 MHz #Res BW 300 kHz **#VBW 1 MHz** Sweep 4 ms (401 pts) Signal Track Occupied Bandwidth Occ BW % Pwr 99.00 % On Off x dB -20.00 dB 12.1593 MHz Transmit Freq Error 8.816 kHz x dB Bandwidth 13.981 MHz

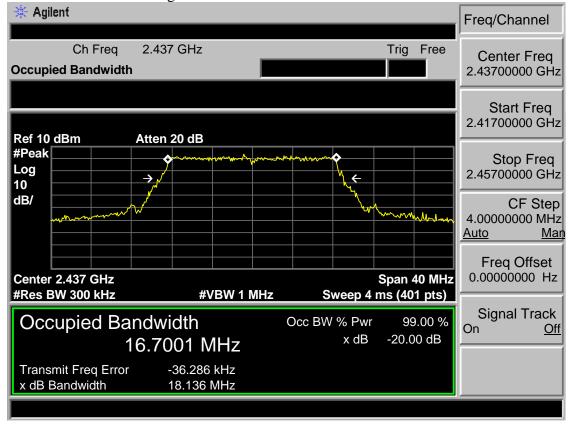




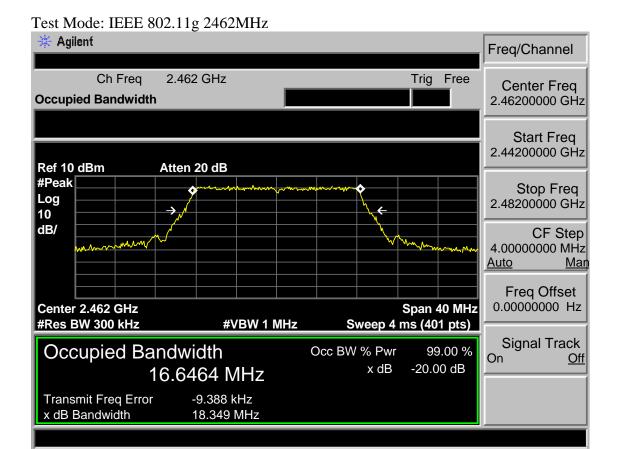
Test Mode: IEEE 802.11g 2412MHz



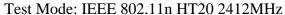
Test Mode: IEEE 802.11g 2437MHz

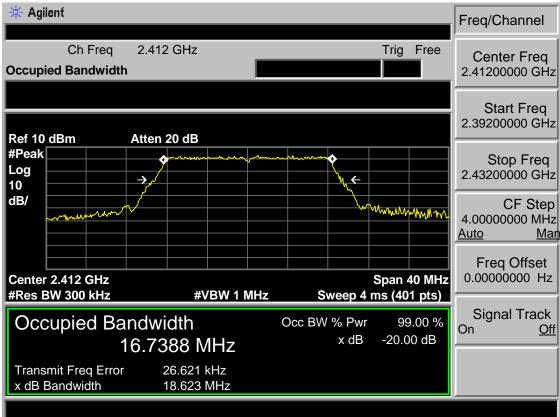




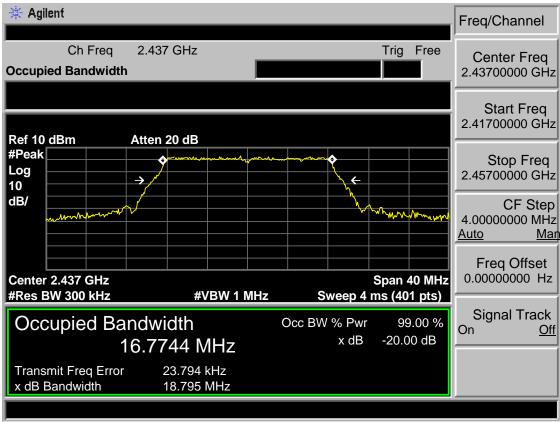




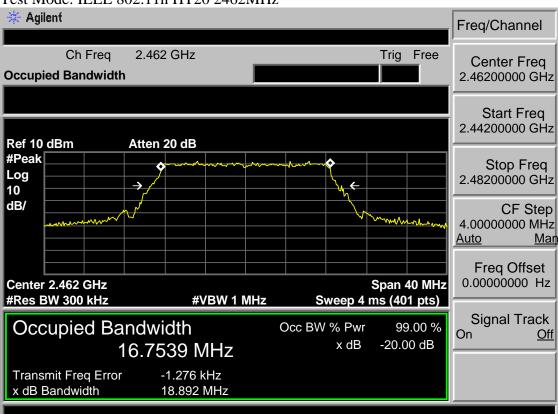




Test Mode: IEEE 802.11n HT20 2437MHz

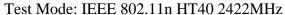


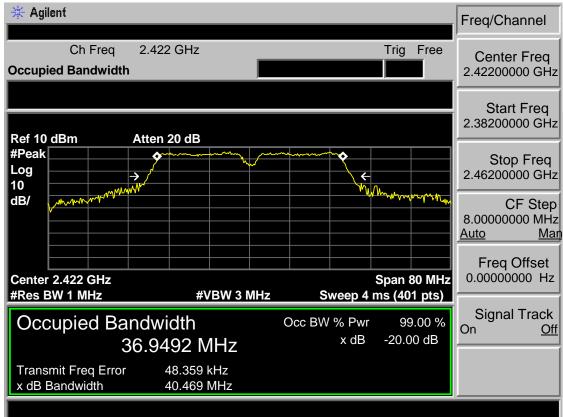




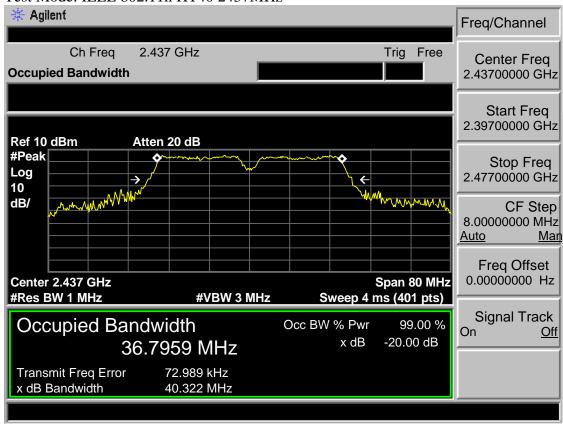








Test Mode: IEEE 802.11n HT40 2437MHz





Agilent Freq/Channel Ch Freq 2.452 GHz Trig Free Center Freq **Occupied Bandwidth** 2.45200000 GHz Start Freq 2.41200000 GHz Ref 10 dBm Atten 20 dB #Peak Stop Freq 2.49200000 GHz Log \rightarrow 10 Mary Market dB/ CF Step 8.00000000 MHz Man <u>Auto</u> Freq Offset 0.00000000 Hz Center 2.452 GHz Span 80 MHz #Res BW 1 MHz **#VBW 3 MHz** Sweep 4 ms (401 pts) Signal Track Occupied Bandwidth Occ BW % Pwr 99.00 % On Off x dB -20.00 dB 36.8172 MHz Transmit Freq Error 12.040 kHz x dB Bandwidth 40.077 MHz





7 OUTPUT POWER TEST

7.1 Limit

For systems using digital modulation in the 2400—2483.5MHz, The Peak out put Power shall not exceed 1W(30dBm)

7.2 Test Procedure

7.3Test Procedure

- 1, Connected the EUT's antenna port to spectrum analyzer device.
- 2, Follow the test procedure as described in KDB 558074
 - (1)Set span to at least 1.5 times the OBW.
 - (2)Set RBW = 1-5% of the OBW, not to exceed 1 MHz.
 - (3)Set VBW \geq 3 x RBW.
 - (4)Number of points in sweep $\geq 2 \times \text{span} / \text{RBW}$. (This gives bin-to-bin spacing $\leq \text{RBW}/2$, so that narrowband signals are not lost between frequency bins.)
 - (4)Sweep time = auto.
 - (5)Detector = RMS (i.e., power averaging), if available. Otherwise, use sample detector mode.
 - (6)If transmit duty cycle < 98 %, use a sweep trigger with the level set to enable triggering only on full power pulses. The transmitter shall operate at maximum power control level for the entire duration of every sweep. If the EUT transmits continuously (i.e., with no off intervals) or at duty cycle ≥ 98 %, and if each transmission is entirely at the maximum power control level, then the trigger shall be set to "free run".
 - (7)Trace average at least 100 traces in power averaging (i.e., RMS) mode.
 - (8)Compute power by integrating the spectrum across the OBW of the signal using the instrument's band power measurement function, with band limits set equal to the OBW band edges. If the instrument does not have a band power function, sum the spectrum levels (in power units) at intervals equal to the RBW extending across the entire OBW of the spectrum.

Note: The cable loss and attenuator loss were offset into measure device as an amplitude offset.



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7.4 Test Result

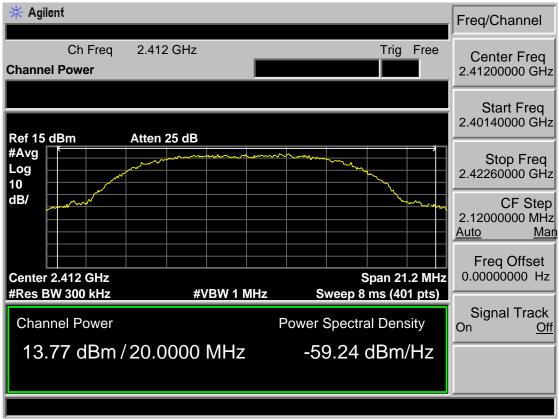
EUT: 38.5inch HD SMA	RT TV		
M/N: ELSW3917BF			
Test date: 2017-06-08		Tested by: Tony.Tang	Test site: RF Site
		Pass	
Test Mode	СН	Conducted Power (dBm)	Limit (dBm)
IEEE 802.11 b	CH1	13.77	30
	СН6	13.39	30
	CH11	12.71	30
IEEE 802.11 g	CH1	8.58	30
	СН6	7.73	30
	CH11	7.56	30
IEEE 802.11 n HT 20	CH1	7.99	30
	СН6	7.93	30
	CH11	7.39	30
IEEE 802.11 n HT 40	СНЗ	6.73	30
	CH6	6.49	30
	CH9	6.08	30
Conclusion: PASS		•	



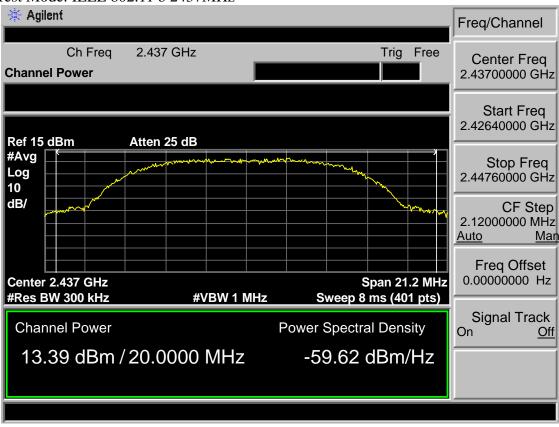
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7.5 Test Data

Test Mode: IEEE 802.11 b 2412MHz



Test Mode: IEEE 802.11 b 2437MHz



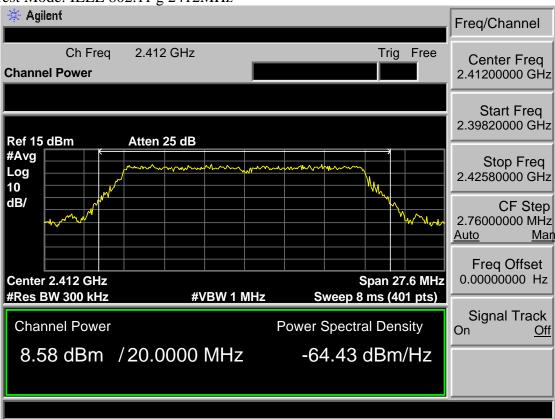


Test Mode: IEEE 802.11 b 2472MHz





Test Mode: IEEE 802.11 g 2412MHz

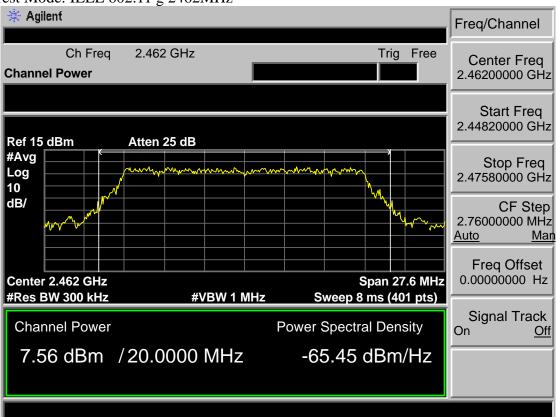


Test Mode: IEEE 802.11 g 2437MHz

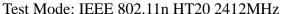


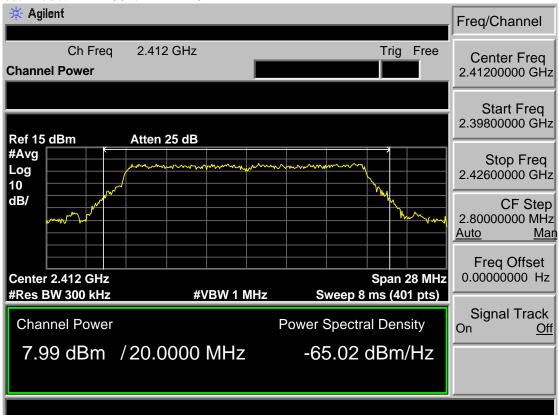


Test Mode: IEEE 802.11 g 2462MHz

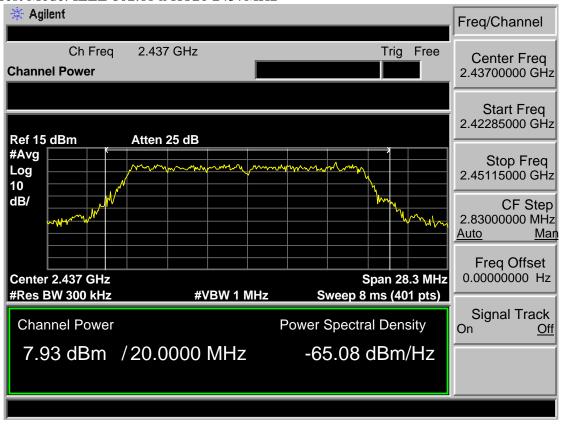








Test Mode: IEEE 802.11 n HT20 2437MHz



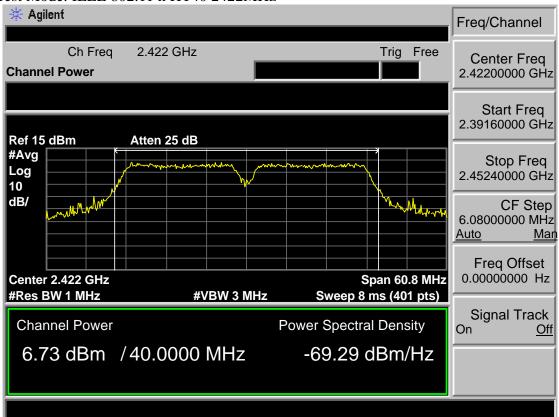


Test Mode: IEEE 802.11 n HT20 2462MHz

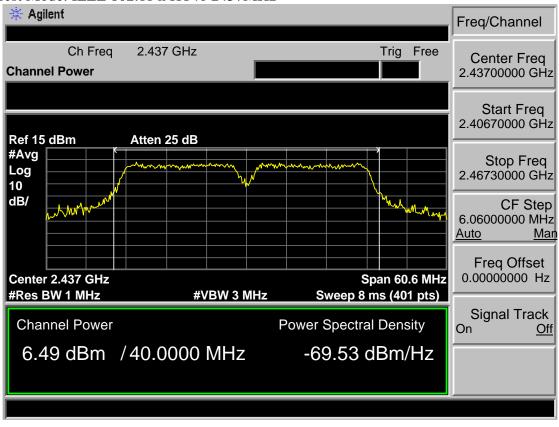






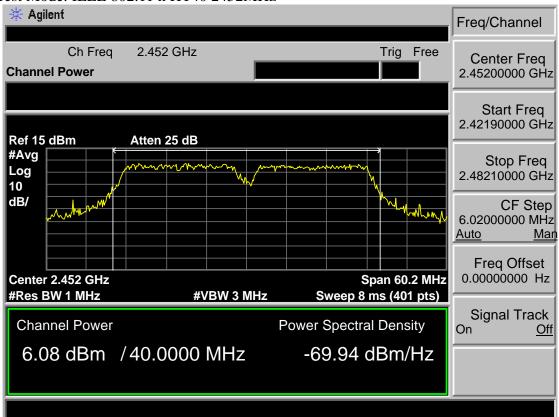


Test Mode: IEEE 802.11 n HT40 2437MHz





Test Mode: IEEE 802.11 n HT40 2452MHz





8 POWER SPECTRAL DENSITY TEST

8.1 Limit

For digitally modulated systems, the power spectral density conducted from the intentional radiator to the antenna shall not be greater than 8dBm in any 3kHz band during any time interval of continuous transmission.

8.2 Test Procedure

- 1, Connected the EUT's antenna port to spectrum analyzer device.
- 2, Follow the test procedure as described in KDB 558074
- (1). Set analyzer center frequency to DTS channel center frequency.
- (2). Set the span to 1.5 times the DTS bandwidth.
- (3). Set the RBW to: $3 \text{ kHz} \leq \text{RBW} \leq 100 \text{ kHz}$.
- (4). Set the VBW \geq 3 RBW.
- (5). Detector = peak.
- (6). Sweep time = auto couple.
- (7). Trace mode = max hold.
- (8). Allow trace to fully stabilize.
- (9). Use the peak marker function to determine the maximum amplitude level.
- (10). If measured value exceeds limit, reduce RBW (no less than 3 kHz) and repeat.



8.3 Test Result

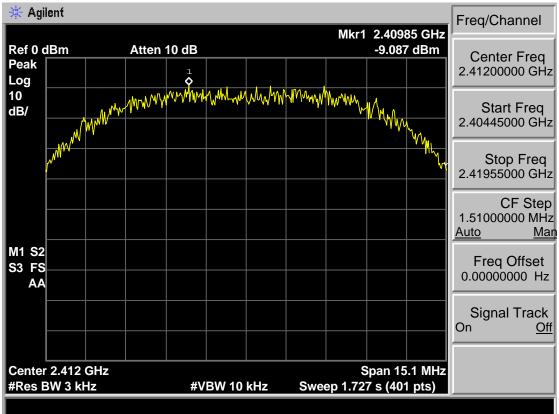
EUT: 38.5inch HD SMA	ART TV		
M/N: ELSW3917BF			
Test date: 2017-06-08		Tested by: Tony Tang	Test site: RF site
		Pass	•
Test Mode	СН	Power density (dBm/3kHz)	Limit (dBm/3kHz)
IEEE 802.11 b	CH1	-9.087	8
	CH6	-9.314	8
	CH11	-9.994	8
IEEE 802.11 g	CH1	-16.700	8
	CH6	-15.250	8
	CH11	-16.000	8
IEEE 802.11 n HT 20	CH1	-15.490	8
	CH6	-15.540	8
	CH11	-16.770	8
IEEE 802.11 n HT 40	CH3	-19.220	8
	CH6	-19.070	8
	CH9	-18.900	8
Conclusion: PASS			



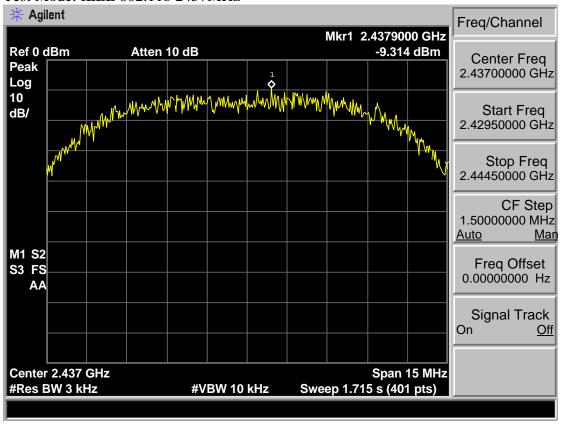
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8.4 Test Data

Test Mode: IEEE 802.11b 2412MHz

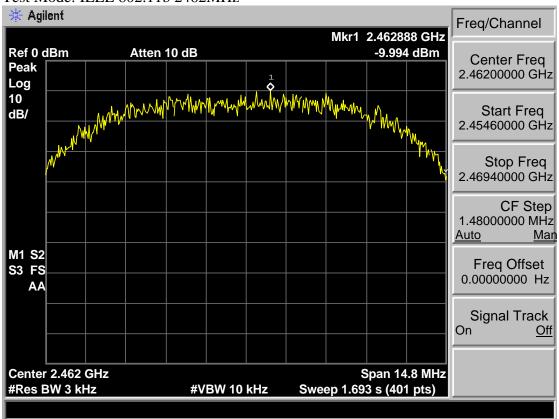


Test Mode: IEEE 802.11b 2437MHz



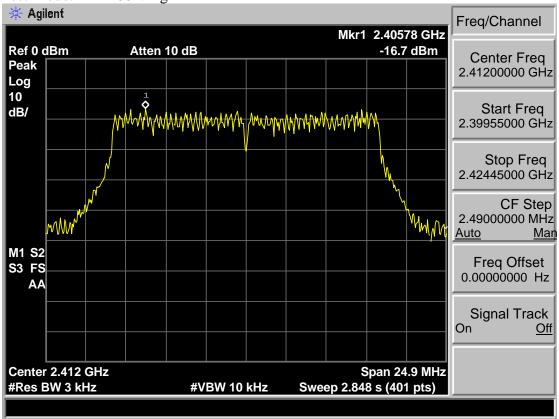


Test Mode: IEEE 802.11b 2462MHz

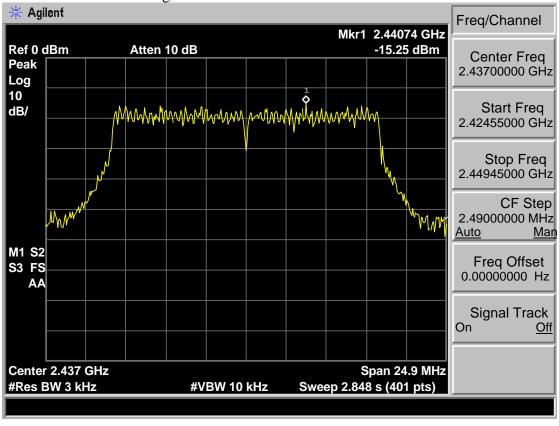




Test Mode: IEEE 802.11g 2412MHz



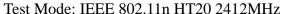
Test Mode: IEEE 802.11g 2437MHz

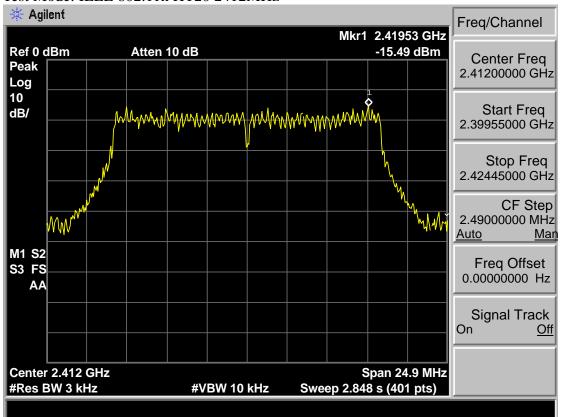




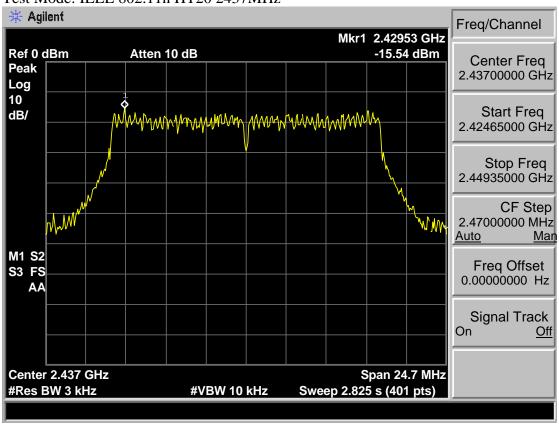
Test Mode: IEEE 802.11g 2462MHz # Agilent Freq/Channel Mkr1 2.45453 GHz -16 dBm Ref 0 dBm Atten 10 dB Center Freq Peak 2.46200000 GHz Log 10 Start Freq 2.44955000 GHz dB/ Stop Freq 2.47445000 GHz CF Step 2.49000000 MHz Man <u>Auto</u> M1 S2 S3 FS Freq Offset 0.00000000 Hz AA Signal Track On Off Center 2.462 GHz Span 24.9 MHz #Res BW 3 kHz #VBW 10 kHz Sweep 2.848 s (401 pts)





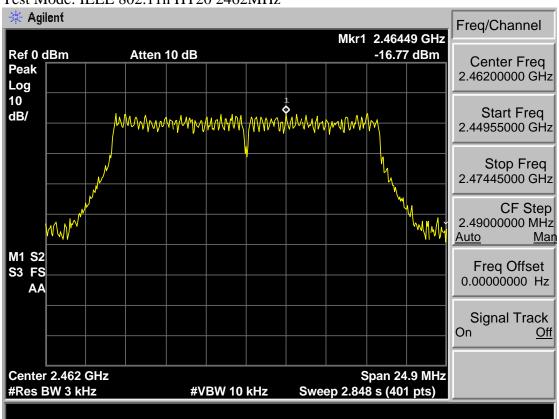


Test Mode: IEEE 802.11n HT20 2437MHz



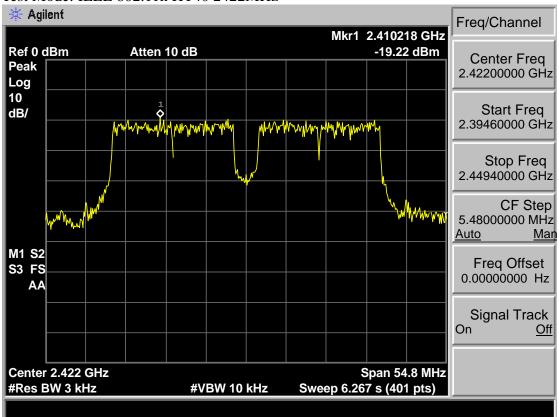


Test Mode: IEEE 802.11n HT20 2462MHz

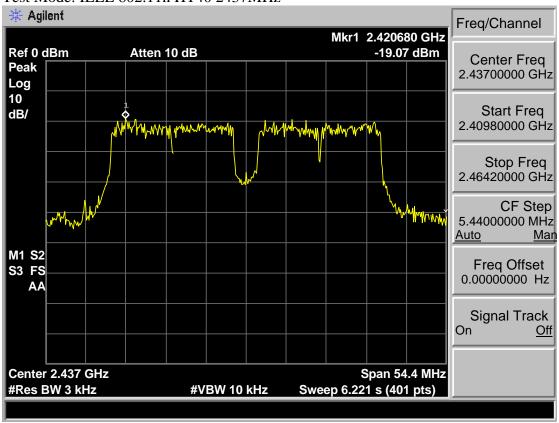




Test Mode: IEEE 802.11n HT40 2422MHz

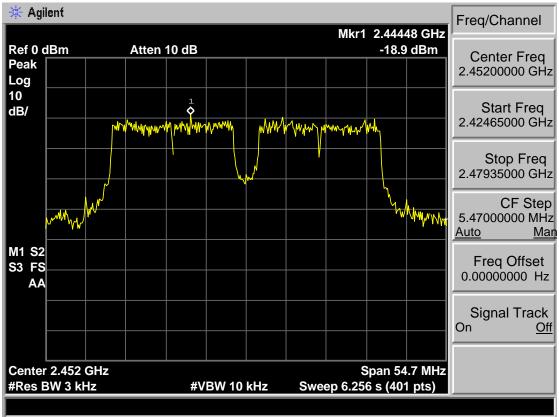


Test Mode: IEEE 802.11n HT40 2437MHz





Test Mode: IEEE 802.11n HT40 2452MHz Agilent





9 ANTENNA REQUIREMENTS

9.1 Limit

For intentional device, according to FCC 47 CFR Section 15.203, an intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device. And according to FCC 47 CFR Section 15.247 (b), if transmitting antennas of directional gain greater than 6dBi are used, the power shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6dBi.

9.2 Result

The antennas used for this product are Integral antenna and that no antenna other than that furnished by the responsible party shall be used with the device, the maximum peak gain of the transmit antenna is only 2 dBi.



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10 TEST SETUP PHOTO

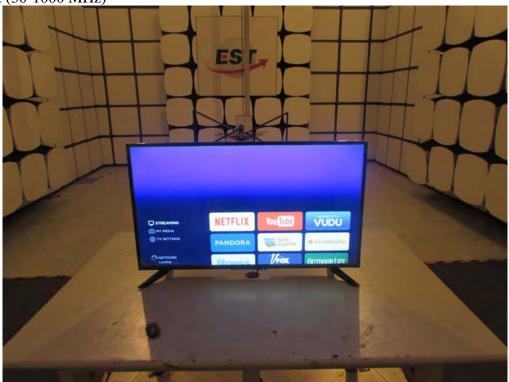
Conducted Test







Radiated Test (30-1000 MHz)



Radiated Test (1000-25000 MHz)





11 PHOTOS OF EUT

External Photos







External Photos M/N: ELSW3917BF

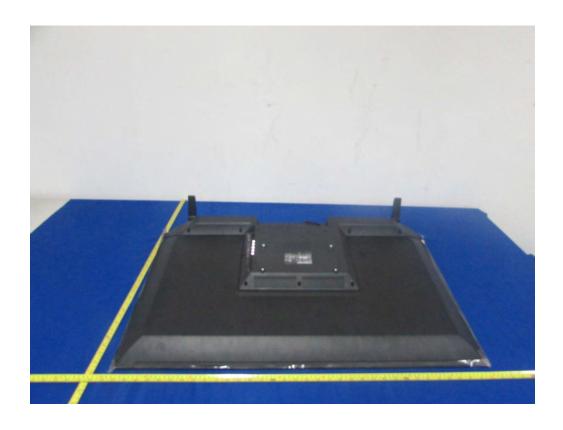






External Photos M/N: ELSW3917BF







External Photos M/N: ELSW3917BF







External Photos







Internal Photos M/N: ELSW3917BF







Internal Photos







Internal Photos

M/N: ELSW3917BF



Wifi Antenna

