FCC PART 15C TEST REPORT FOR CERTIFICATION On Behalf of

Chunghsin Technology Group CO., LTD

55 inch DLED SMART TV

Model Number: E4SFT5517

FCC ID: 2AE2W-5517

Prepared for:	Chunghsin Technology Group CO., LTD				
	NO. 618-2 GONGREN WEST ROAD, JIAOJIANG AREA,				
	TAIZHOU, ZHEJIANG, China				
Prepared By:	EST Technology Co., Ltd.				
	Chilingxiang, Qishantou, Santun, Houjie, Dongguan, Guangdong, China				
	Tel: 86-769-83081888-808				

Report Number:	ESTE-R1801079
Date of Test:	Jan. 23~29, 2018
Date of Report:	Jan. 30, 2018



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EST Technology Co., Ltd.

Applicant: Address:	•	ogy Group CO., LTD REN WEST ROAD, JIA ANG, China	AOJIANG AREA,			
Manufacturer Address:	Chunghsin Technology Group CO., LTD NO. 618-2 GONGREN WEST ROAD, JIAOJIANG AREA, TAIZHOU, ZHEJIANG, China					
E.U.T:	55 inch DLED SMA	ART TV				
Model Number:	E4SFT5517					
Power Supply:	AC 120V~50/60Hz	, 130W				
Test Voltage:	AC 120V/60Hz					
Trade Name:	element	Serial No.:				
Date of Receipt:	Jan. 23, 2018	Date of Test:	Jan. 23~29, 2018			
Test Specification:	FCC Rules and Reg ANSI C63.10:2013	gulations Part 15 Subpa	rt C:2017			
Test Result:	The device described above is tested by EST Technology Co., Ltd The measurement results were contained in this test report and EST Technology Co., Ltd. was assumed full responsibility for the accuracy and completeness of these measurements. Also, this report shows that the EUT to be technically compliance with the FCC Rules and Regulations Part 15 Subpart C requirements.					
		to above tested sample approval of EST Tech				
Prepared by:	Date: Jan. 30, 2018 gy Approved by: Approved by:					
	Low Lathoring					
Amy / Assistant	Tony / I	Engineer	Iceman Hu / Manager			
Other Aspects: None.						
Abbreviations: OK/P=passe	ed fail/F=failed	n.a/N=not applicable	E.U.T=equipment under tested			
This test report is based on a single evaluation of one sample of above mentioned products ,It is not permitted to be duplicated in extracts without written approval of EST Technology Co., Ltd.						

1. GENERAL INFORMATION

1.1. Description of Device (EUT)

Product Name	:	55 inch DLED SMART TV					
Model Number	:	E4SFT5517					
FCC ID	:	2AE2W-5517					
Modulation	:	IEEE 802.11b mode: DS	SS(CCK,QPSK, BPSK)				
			DM (BPSK/QPSK/16QA	- /			
			de: OFDM (BPSK/QPSK/				
		IEEE 802.11n HT40 mod	de: 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: 242	22 ~ 2452 MHz				
Number of channel	:	IEEE 802.11b 2412 ~ 2462 MHz: 11 Channels IEEE 802.11g 2412 ~ 2462 MHz: 11 Channels IEEE 802.11n HT20 2412 ~ 2462 MHz: 11 Channels IEEE 802.11n HT40 2422 ~ 2452 MHz: 7 Channels					
Antenna	:	Internal antenna					
7 Hitchina	ľ	Directional gain:4.22dBi					
			G)+10*LOG(N)=1.21+10)*LOG(2))			
		Frequency Range	Antenna 0	Antenna 1			
		2400~2483.5 MHz	1.21 dBi	1.21 dBi			
		IEEE 802.11b/g Use SISO IEEE 802.11n Use MIMO					
Sample Type	:	Prototype production					



2. SUMMARY OF TEST

2.1. Summary of test result

Description of Test Item	Standard	Results
	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
	KDB 558074	
	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
	KDB 558074	
	FCC Part 15: 15.247	
Peak Output Power	ANSI C63.10:2013	PASS
_	KDB 558074	
	FCC Part 15: 15.247	
Power Spectral Density	ANSI C63.10:2013	PASS
•	KDB 558074	
Antenna requirement	FCC Part 15: 15.203	PASS
N	1 04	

Note: KDB 558074 D01 DTS Meas Guidance v04



2.2. Test Facilities

EMC Lab	:	Certificated by CNAS, CHINA Registration No.: L5288 Date of registration: November 13, 2017 Certificated by A2LA, USA Registration No.: 4366.01 Date of registration: November 07, 2017 Certificated by FCC, USA Designation Number: CN1215 Registration No.: 722932 Date of registration: November 21, 2017 Certificated by Industry Canada Registration No.: 9405A Date of registration: December 03, 2015 Certificated by VCCI, Japan Registration No.: R-13663; C-14103 Date of registration: July 25, 2017 This Certificate is valid until: July 24, 2020 Certificated by TUV Rheinland, Germany Registration No.: UA 50195514 0001 Date of registration: February 07, 2015
		Date of registration: January 27, 2011 Certificated by Intertek ETL SEMKO Registration No.: 2011-RTL-L2-64 Date of registration: April 28, 2011 Certificated by Nemko, Hong Kong Registration No.: 175193 Date of registration: May 4, 2011
Name of Firm	:	EST Technology Co., Ltd.
Site Location	:	Chilingxiang, Qishantou, Santun, Houjie, Dongguan, Guangdong, China



2.3. Measurement uncertainty

Test Item	Uncertainty		
Uncertainty for Conduction emission test	±3.48dB		
Uncertainty for spurious emissions test	±4.60 dB(Polarize: H)		
(30MHz-1GHz)	±4.68 dB(Polarize: V)		
Uncertainty for spurious emissions test (1GHz to 18GHz)	±4.96dB		
Uncertainty for radio frequency	7×10 ⁻⁸		
Uncertainty for conducted RF Power	0.20dB		
Uncertainty for Power density test	0.26dB		

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

2.4. Assistant equipment used for test

2.4.1. N/A

2.5. Block Diagram

For radiated emissions test: EUT was placed on a turn table, which is 0.8 or 1.5 meter high above ground. EUT was be set into Wi-Fi test mode by software before test.



(EUT: 55 inch DLED SMART TV)



2.6. 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

2.7. Channel List

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

2.8. Test Equipment

2.8.1. For conducted emission test

Equipment	Manufacturer	Model No.	Serial No.	Calibration	Last Cal.	Next Cal.
				Body		
EMI Test Receiver	Rohde	ESHS30	832354	CEPREI	June 17,17	1 Year
	& Schwarz					
Artificial Mains Network	Rohde	ENV216	101260	CEPREI	June 17,17	1 Year
	& Schwarz					
Pulse Limiter	Rohde	ESH3-Z2	101100	CEPREI	June 17,17	1 Year
	& Schwarz					
Test Software	Audix	e3-6.111221a	N/A	N/A	N/A	N/A

2.8.2. For radiated emission test(9 kHz-30MHz)

Equipment	Manufacturer	Model No.	Serial No.	Calibration	Last Cal.	Next Cal.
				Body		
EMI Test	Rohde	ESR7	101780	CEPREI	June 17,17	1 Year
Receiver	& Schwarz					
Active Loop Antenna	SCHWARZB	FMZB1519	1519-038	CEPREI	October	1 Year
	ECK				08,17	
Test Software	Audix	e3-6.111221a	N/A	N/A	N/A	N/A

2.8.3. For radiated emissions test (30-1000MHz)

Equipment	Manufacturer	Model No.	Serial No.	Calibration	Last Cal.	Next Cal.
				Body		
EMI Test	Rohde	ESR7	101780	CEPREI	June 17,17	1 Year
Receiver	& Schwarz					
Bilog Antenna	Teseq	CBL 6111D	27090	CEPREI	June 08,17	1 Year
Test Software	Audix	e3-6.111221a	N/A	N/A	N/A	N/A

2.8.4. For radiated emission test(above 1GHz)

Equipment	Manufacturer	Model No.	Serial No.	Calibration	Last Cal.	Next Cal.
				Body		
Horn Antenna	SCHWARZB	BBHA 9120 D	BBHA912	CEPREI	June 08,17	1 Year
	ECK		0D1002			
Horn Antenna	SCHWARZB	BBHA9170	BBHA917	CEPREI	June 08,17	1Year
	ECK		0242			
Signal Amplifier	SCHWARZB	BBV9718	9718-212	CEPREI	March	1 Year
	ECK				12,17	
Spectrum Analyzer	Rohde	FSV	103173	CEPREI	June 17,17	1 Year
	&Schwarz					
PSA Series Spertrum	Agilent	E4447A	MY50180	CEPREI	June 16,17	1Year
Analyzer			031			
Test Software	Audix	e3-6.111221a	N/A	N/A	N/A	N/A



2.8.5. For connect EUT antenna terminal test

Equipment	Manufacturer	Model No.	Serial No.	Calibration Body	Last Cal.	Next Cal.
Spectrum Analyzer	Rohde &Schwarz	FSV	103173	CEPREI	June 17,17	1 Year
Spectrum Analyzer	Agilent	E4408B	MY44211 139	CEPREI	June 17,17	1 Year



3 POWER LINE CONDUCTED EMISSION TEST

3.1. Limit

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

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

3.2. 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.

3.3. Test Result

PASS.



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

3.4. Test data

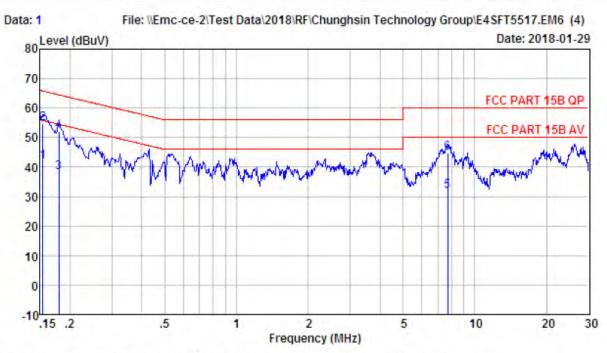
EST Technology

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Data no. : 1

LINE Phase : LINE



Site no : 2# Conduction Shield Room

Env. / Ins. : Temp:21.5°C Humi:52% Press:101.50kPa

Limit : FCC PART 15B QP

Engineer : Seven

EUT : 55 inch DLED SMART TV

Power : AC 120V/50Hz M/N : E4SFT5517 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	9.66	0.04	32.09	41.79	55.78	13.99	Average
2	0.15	9.66	0.04	45.09	54.79	65.78	10.99	QP
3	0.18	9.67	0.04	28.29	38.00	54.50	16.50	Average
4	0.18	9.67	0.04	42.29	52.00	64.50	12.50	QP
5	7.69	9.88	0.08	21.74	31.70	50.00	18.30	Average
6	7.69	9.88	0.08	34.74	44.70	60.00	15.30	QP

Remarks: 1. Emission Level= LISN Factor + Cable Loss + Reading.

- 2. Margin= Limit Emission Level.
- If the average limit is met when useing a quasi-peak detector, the EUT shall be deemed to meet both limits and measurement with average detector is unnecessary.

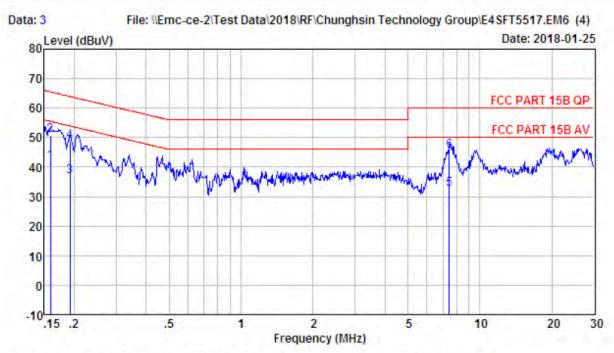


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Data no. : 3

LINE Phase : NEUTRAL



Site no : 2# Conduction Shield Room

Env. / Ins. : Temp:21.5°C Humi:52% Press:101.50kPa

Limit : FCC PART 15B QP

Engineer : Seven

EUT : 55 inch DLED SMART TV

Power : AC 120V/50Hz
M/N : E4SFT5517
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	0.16	9.64	0.04	32.21	41.89	55.52	13.63	Average
2	0.16	9.64	0.04	41.21	50.89	65.52	14.63	QP
3	0.19	9.66	0.04	27.11	36.81	53.93	17.12	Average
4	0.19	9.66	0.04	39.11	48.81	63.93	15.12	QP
5	7.45	9.95	0.08	22.55	32.58	50.00	17.42	Average
6	7.45	9.95	0.08	35.55	45.58	60.00	14.42	QP

Remarks: 1. Emission Level= LISN Factor + Cable Loss + Reading.

- 2. Margin= Limit Emission Level.
- If the average limit is met when useing a quasi-peak detector, the EUT shall be deemed to meet both limits and measurement with average detector is unnecessary.



4 RADIATED EMISSION TEST

4.1 Limit

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.

15.205 Restricted frequency band

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)

15.209 Limit

13.207 Lillit		
Frequency (MHz)	Field Strength(µV/m)	Distance(m)
0.009-0.490	2400/F(kHz)	300
0.490-1.705	24000/F(kHz)	30
1.705-30	30	30
30-88	100	3
88-216	150	3
216-960	200	3
Above 960	500	3

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.

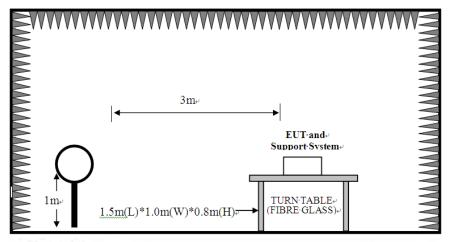
Report No. ESTE-R1801079

(3) Distance is the distance in meters between the measuring instrument, antenna and the closest point of any part of the device or system.

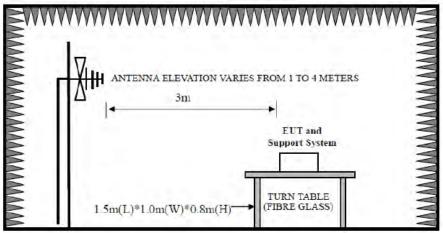


4.2. Block Diagram of Test setup

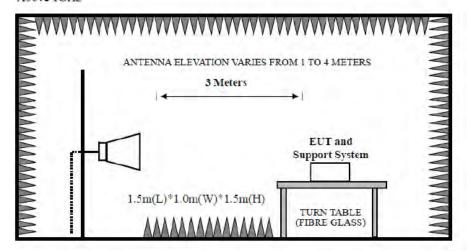
9kHz~30MHz



30~1000MHz



Above 1GHz





4.3. Test Procedure

EUT was placed on a turn table, which is 0.8 meter high above ground for 9kHz~1000MHz test, and which is 1.5 meter high above ground for above 1GHz test. 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. Both horizontal and vertical polarization of the antenna are set on test.

The test frequency analyzer system was set to Peak Detect (300Hz RBW in 9kHz to 150kHz and 10kHz RBW in 150kHz to 30MHz) Function and Specified Bandwidth with Maximum Hold Mode.

The bandwidth of the EMI test receiver (R&S ESVS10) is set at 120kHz for frequency range from 30MHz to 1000 MHz.

The bandwidth of the Spectrum's VBW is set at 1MHz 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.

- 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. 2437 MHz. 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

9 kHz – 30 MHz

Pass

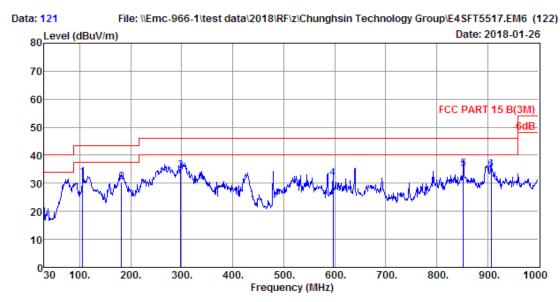
Note: The amplitude of spurious emission that is attenuated by more than 20dB below the permissible limit has no need to be reported.



30-1000 MHz

EST Technology

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Site no : 1# 966 Chamber Data no. : 121 Env. / Ins. : Temp:23.5°C Humi:53% Press:101.50kPa LINE Phase : HORIZONTAL

Limit : FCC PART 15 B(3M)

Engineer : Seven

EUT : 55 inch DLED SMART TV

Power : AC 120V/60Hz M/N : E4SFT5517 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	105.66	10.50	1.09	20.60	32.19	43.50	11.31	QP
2	182.29	9.36	1.42	19.62	30.40	43.50	13.10	QP
3	297.72	13.72	2.04	18.77	34.53	46.00	11.47	QP
4	596.48	20.09	3.18	8.71	31.98	46.00	14.02	QP
5	852.56	23.25	3.89	8.02	35.16	46.00	10.84	QP
6	906.88	24.04	4.06	6.86	34.96	46.00	11.04	QP

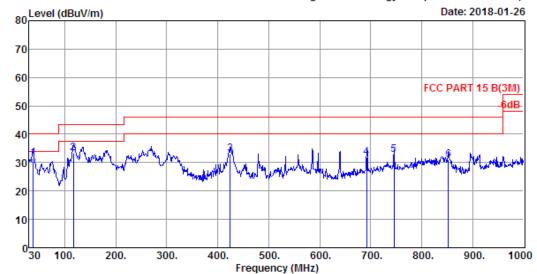
Remarks: 1. Emission Level= LISN Factor + Cable Loss + Reading.

- 2. Margin= Limit Emission Level.
- If the average limit is met when useing a quasi-peak detector, the EUT shall be deemed to meet both limits and measurement with average detector is unnecessary.



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Data: 122 File: \\Emc-966-1\test data\2018\RF\z\Chunghsin Technology Group\E4SFT5517.EM6 (122)



Site no : 1# 966 Chamber Data no. : 122 : Temp:23.5°C Humi:53% Press:101.50kPa LINE Phase : VERTICAL Env. / Ins.

Limit : FCC PART 15 B (3M)

Engineer : Seven

: 55 inch DLED SMART TV EUT

: AC 120V/60Hz Power : E4SFT5517 M/N Test Mode : TX Mode

		LISN	Cable		Emission			
	Freq.	Factor (dB/m)	Loss (dB)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	37.76	14.00	0.36	17.12	31.48	40.00	8.52	QP
2	117.30	11.42	1.13	20.81	33.36	43.50	10.14	QP
3	424.79	16.60	2.49	14.08	33.17	46.00	12.83	QP
4	692.51	21.27	3.42	7.17	31.86	46.00	14.14	QP
5	745.86	22.14	3.82	6.74	32.70	46.00	13.30	QP
6	852.56	23.25	3.89	3.89	31.03	46.00	14.97	QP

Remarks: 1. Emission Level= LISN Factor + Cable Loss + Reading.
2. Margin= Limit - Emission Level.

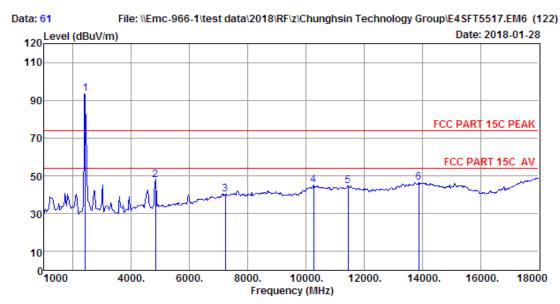
- 3. If the average limit is met when useing a quasi-peak detector, the EUT shall be deemed to meet both limits and measurement with average detector is unnecessary.



1000-18000 MHz

EST Technology

Chilingxiang, Qishantou, Santun, Houjie, Dongguan, Guangdong, China Tel:+86-769-83081888 Fax:+86-769-83081878



Site no. : 1# 966 Chamber Data no. : 61
Dis. / Ant. : 3m ANT9120D 1-18G Ant. pol. : VERTICAL

Limit : FCC PART 15C PEAK

Env. / Ins. : Temp:23.5'; Humi:51%; Press:101.52kPa

Engineer : Seven

EUT : 55 inch DLED SMART TV

Power : AC 120V/60Hz M/N : E4SFT5517

Test Mode : IEEE 802.11b CH1 TX 2412MHz

ANT 1

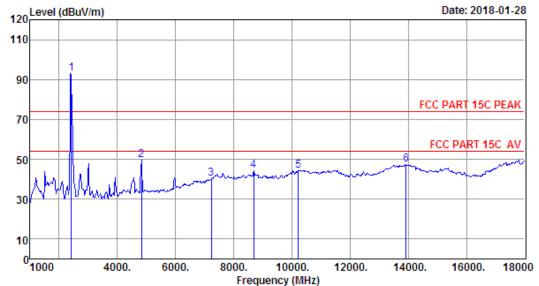
	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Amp Factor (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	2412.00	27.39	3.23	0.00	62.73	93.35	74.00	-19.35	Peak
2	4824.00	32.09	4.69	0.00	10.97	47.75	74.00	26.25	Peak
3	7236.00	36.63	6.03	0.00	-2.50	40.16	74.00	33.84	Peak
4	10265.00	39.21	9.98	0.00	-4.01	45.18	74.00	28.82	Peak
5	11455.00	40.08	8.28	0.00	-3.53	44.83	74.00	29.17	Peak
6	13886.00	41.61	10.11	0.00	-5.34	46.38	74.00	27.62	Peak

- 2. Margin= Limit Emission Level.
- The emission levels that are 20dB below the official limit are not reported.



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Data: 62 File: \\Emc-966-1\\test data\\2018\\RF\z\\Chunghsin Technology Group\\E4SFT5517.EM6 (122)



Site no. : 1# 966 Chamber Data no. : 62

Dis. / Ant. : 3m ANT9120D 1-18G Ant. pol. : HORIZONTAL

Limit : FCC PART 15C PEAK

Env. / Ins. : Temp:23.5'; Humi:51%; Press:101.52kPa

Engineer : Seven

EUT : 55 inch DLED SMART TV

Power : AC 120V/60Hz M/N : E4SFT5517

Test Mode : IEEE 802.11b CH1 TX 2412MHz

ANT 1

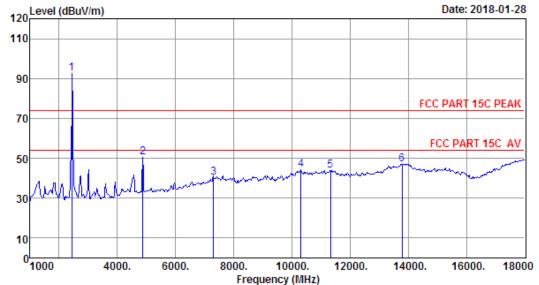
	Freq.	Ant. Factor (dB/m)	Cable Loss (dB)	Amp Factor (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	2412.00	27.39	3.23	0.00	62.20	92.82	74.00	-18.82	Peak
2	4824.00	32.09	4.69	0.00	12.76	49.54	74.00	24.46	Peak
3	7236.00	36.63	6.03	0.00	-2.18	40.48	74.00	33.52	Peak
4	8684.00	37.46	6.90	0.00	0.03	44.39	74.00	29.61	Peak
5	10214.00	39.19	9.77	0.00	-4.50	44.46	74.00	29.54	Peak
6	13920.00	41.63	10.11	0.00	-4.54	47.20	74.00	26.80	Peak

- 2. Margin= Limit Emission Level.
- The emission levels that are 20dB below the official limit are not reported.



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Data: 63 File: \\Emc-966-1\test data\\2018\\RF\z\\Chunghsin Technology Group\\E4SFT5517.EM6 (122)



Site no. : 1# 966 Chamber Data no. : 63
Dis. / Ant. : 3m ANT9120D 1-18G Ant. pol. : VERTICAL

Limit : FCC PART 15C PEAK

Env. / Ins. : Temp:23.5'; Humi:51%; Press:101.52kPa

Engineer : Seven

EUT : 55 inch DLED SMART TV

Power : AC 120V/60Hz M/N : E4SFT5517

Test Mode : IEEE 802.11b CH6 TX 2437MHz

ANT 1

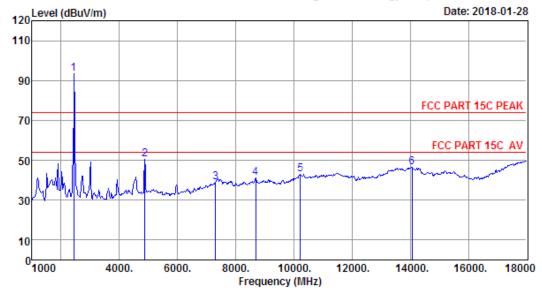
	Freq.	Ant. Factor (dB/m)	Cable Loss (dB)	Amp Factor (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	2437.00	27.48	3.26	0.00	61.70	92.44	74.00	-18.44	Peak
2	4874.00	32.18	4.73	0.00	13.68	50.59	74.00	23.41	Peak
3	7311.00	36.78	6.09	0.00	-2.53	40.34	74.00	33.66	Peak
4	10316.00	39.23	10.20	0.00	-5.34	44.09	74.00	29.91	Peak
5	11336.00	40.03	8.32	0.00	-4.40	43.95	74.00	30.05	Peak
6	13784.00	41.53	10.05	0.00	-4.60	46.98	74.00	27.02	Peak

- 2. Margin= Limit Emission Level.
- The emission levels that are 20dB below the official limit are not reported.



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Data: 64 File: \\Emc-966-1\test data\\2018\\RF\z\\Chunghsin Technology Group\\E4SFT5517.EM6 (122)



Site no. : 1# 966 Chamber Data no. : 64

Dis. / Ant. : 3m ANT9120D 1-18G Ant. pol. : HORIZONTAL

Limit : FCC PART 15C PEAK

Env. / Ins. : Temp:23.5'; Humi:51%; Press:101.52kPa

Engineer : Seven

EUT : 55 inch DLED SMART TV

Power : AC 120V/60Hz M/N : E4SFT5517

Test Mode : IEEE 802.11b CH6 TX 2437MHz

ANT 1

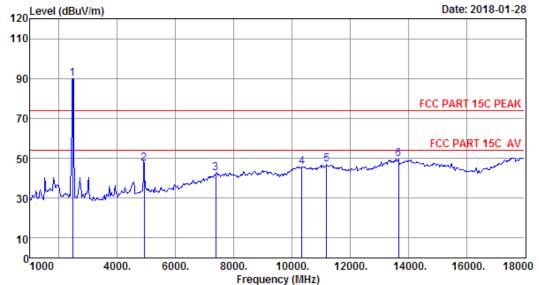
	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Amp Factor (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	2437.00	27.48	3.26	0.00	62.63	93.37	74.00	-19.37	Peak
2	4874.00	32.18	4.73	0.00	13.46	50.37	74.00	23.63	Peak
3	7311.00	36.78	6.09	0.00	-3.93	38.94	74.00	35.06	Peak
4	8684.00	37.46	6.90	0.00	-3.28	41.08	74.00	32.92	Peak
5	10214.00	39.19	9.77	0.00	-6.07	42.89	74.00	31.11	Peak
6	14056.00	41.65	10.13	0.00	-5.33	46.45	74.00	27.55	Peak

- 2. Margin= Limit Emission Level.
- The emission levels that are 20dB below the official limit are not reported.



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Data: 65 File: \\Emc-966-1\test data\2018\RF\z\Chunghsin Technology Group\E4SFT5517.EM6 (122)



Site no. : 1# 966 Chamber

Data no. : 65 Ant. pol. : HORIZONTAL Dis. / Ant. : 3m ANT9120D 1-18G

: FCC PART 15C PEAK

Env. / Ins. : Temp:23.5';Humi:51%;Press:101.52kPa

Engineer : Seven

: 55 inch DLED SMART TV EUT

: AC 120V/60Hz Power M/N : E4SFT5517

Test Mode : IEEE 802.11b CH11 TX 2462MHz

ANT 1

	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	27.52	3.27	0.00	59.05	89.84	74.00	-15.84	Peak
2	4924.00	32.28	4.77	0.00	10.21	47.26	74.00	26.74	Peak
3	7386.00	36.97	6.12	0.00	-0.76	42.33	74.00	31.67	Peak
4	10350.00	39.24	10.10	0.00	-3.55	45.79	74.00	28.21	Peak
5	11200.00	39.98	8.43	0.00	-1.48	46.93	74.00	27.07	Peak
6	13665.00	41.43	9.89	0.00	-1.74	49.58	74.00	24.42	Peak

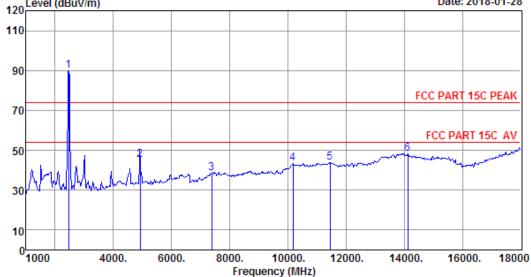
- 2. Margin= Limit Emission Level.
- 3. The emission levels that are 20dB below the official limit are not reported.



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Data: 66 File: \\Emc-966-1\\test data\\2018\\RF\\z\\Chunghsin Technology Group\\E4SFT5517.EM6 (122)

Level (dBuV/m) Date: 2018-01-28



Site no. : 1# 966 Chamber Data no. : 66
Dis. / Ant. : 3m ANT9120D 1-18G Ant. pol. : VERTICAL

Limit : FCC PART 15C PEAK

Env. / Ins. : Temp:23.5'; Humi:51%; Press:101.52kPa

Engineer : Seven

EUT : 55 inch DLED SMART TV

Power : AC 120V/60Hz M/N : E4SFT5517

Test Mode : IEEE 802.11b CH11 TX 2462MHz

ANT 1

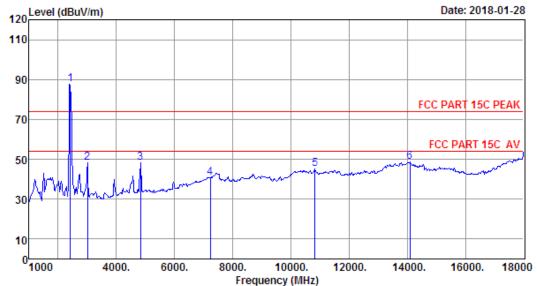
	Freq.	Ant. Factor (dB/m)	Cable Loss (dB)	Amp Factor (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	2462.00	27.52	3.27	0.00	58.90	89.69	74.00	-15.69	Peak
2	4924.00	32.28	4.77	0.00	8.33	45.38	74.00	28.62	Peak
3	7386.00	36.97	6.12	0.00	-4.41	38.68	74.00	35.32	Peak
4	10180.00	39.17	9.62	0.00	-5.45	43.34	74.00	30.66	Peak
5	11455.00	40.08	8.28	0.00	-4.60	43.76	74.00	30.24	Peak
6	14124.00	41.58	10.14	0.00	-3.28	48.44	74.00	25.56	Peak

- 2. Margin= Limit Emission Level.
- The emission levels that are 20dB below the official limit are not reported.



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File: \\Emc-966-1\test data\2018\RF\z\Chunghsin Technology Group\E4SFT5517.EM6 (122)



Site no. : 1# 966 Chamber

Data no. : 67 Ant. pol. : HORIZONTAL Dis. / Ant. : 3m ANT9120D 1-18G

: FCC PART 15C PEAK

Env. / Ins. : Temp:23.5';Humi:51%;Press:101.52kPa

Engineer : Seven

: 55 inch DLED SMART TV EUT

: AC 120V/60Hz Power M/N : E4SFT5517

Test Mode : IEEE 802.11g CH1 TX 2412MHz

ANT 1

	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	27.39	3.23	34.94	91.98	87.66	74.00	-13.66	Peak
2	3006.00	28.40	3.60	37.17	53.32	48.15	74.00	25.85	Peak
3	4824.00	32.09	4.69	35.08	46.46	48.16	74.00	25.84	Peak
4	7236.00	36.63	6.03	33.42	31.70	40.94	74.00	33.06	Peak
5	10826.00	39.69	8.70	33.67	30.28	45.00	74.00	29.00	Peak
6	14090.00	41.61	10.14	32.99	29.84	48.60	74.00	25.40	Peak

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

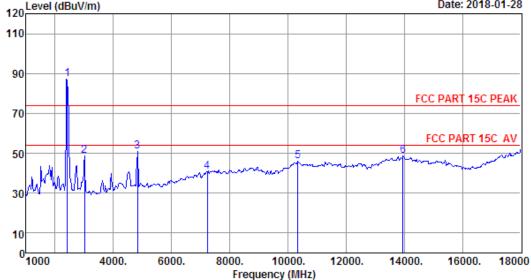
- 2. Margin= Limit Emission Level.
- 3. The emission levels that are 20dB below the official limit are not reported.



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Data: 68 File: \\Emc-966-1\\test data\\2018\\RF\\z\\Chunghsin Technology Group\\E4SFT5517.EM6 (122)

App Level (dBuV/m) Date: 2018-01-28



Site no. : 1# 966 Chamber Data no. : 68
Dis. / Ant. : 3m ANT9120D 1-18G Ant. pol. : VERTICAL

Limit : FCC PART 15C PEAK

Env. / Ins. : Temp:23.5'; Humi:51%; Press:101.52kPa

Engineer : Seven

EUT : 55 inch DLED SMART TV

Power : AC 120V/60Hz M/N : E4SFT5517

Test Mode : IEEE 802.11g CH1 TX 2412MHz

ANT 1

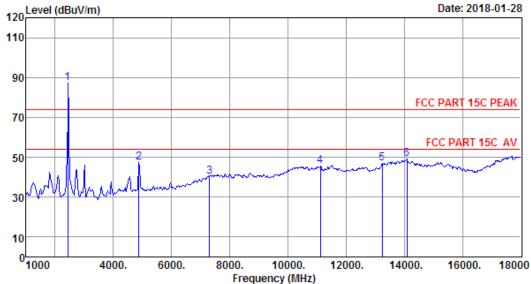
	Freq.	Freq. Factor				Reading	Emission Level	Limits	Margin	Remark
	(MHz)	(dB/m)	(dB)	(dB)	(dBuV)	(dBuV/m)	(dBuV/m)	(dB)		
1	2412.00	27.39	3.23	34.94	91.52	87.20	74.00	-13.20	Peak	
2	3006.00	28.40	3.60	37.17	53.98	48.81	74.00	25.19	Peak	
3	4824.00	32.09	4.69	35.08	49.26	50.96	74.00	23.04	Peak	
4	7236.00	36.63	6.03	33.42	31.59	40.83	74.00	33.17	Peak	
5	10350.00	39.24	10.10	34.30	30.98	46.02	74.00	27.98	Peak	
6	13954.00	41.66	10.12	32.84	29.83	48.77	74.00	25.23	Peak	

- 2. Margin= Limit Emission Level.
- The emission levels that are 20dB below the official limit are not reported.



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Data: 69 File: \|Emc-966-1\|test data\|2018\|RF\|z\|Chunghsin Technology Group\|E4SFT5517.EM6 (122)



Site no. : 1# 966 Chamber Data no. : 69
Dis. / Ant. : 3m ANT9120D 1-18G Ant. pol. : HORIZONTAL

Limit : FCC PART 15C PEAK

Env. / Ins. : Temp:23.5'; Humi:51%; Press:101.52kPa

Engineer : Seven

EUT : 55 inch DLED SMART TV

Power : AC 120V/60Hz M/N : E4SFT5517

Test Mode : IEEE 802.11g CH6 TX 2437MHz

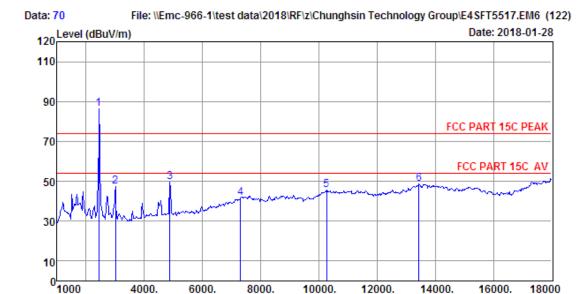
ANT 1

		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	. 2	437.00	27.48	3.26	35.07	91.72	87.39	74.00	-13.39	Peak
2	4	874.00	32.18	4.73	35.14	45.43	47.20	74.00	26.80	Peak
3	7	311.00	36.78	6.09	33.31	30.94	40.50	74.00	33.50	Peak
4	11:	115.00	39.95	8.49	33.23	30.40	45.61	74.00	28.39	Peak
5	13:	240.00	40.68	9.32	32.68	29.55	46.87	74.00	27.13	Peak
6	14	090.00	41.61	10.14	32.99	30.26	49.02	74.00	24.98	Peak

- 2. Margin= Limit Emission Level.
- The emission levels that are 20dB below the official limit are not reported.



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Frequency (MHz)

Site no. : 1# 966 Chamber Data no. : 70
Dis. / Ant. : 3m ANT9120D 1-18G Ant. pol. : VERTICAL

Limit : FCC PART 15C PEAK

Env. / Ins. : Temp:23.5'; Humi:51%; Press:101.52kPa

Engineer : Seven

EUT : 55 inch DLED SMART TV

Power : AC 120V/60Hz M/N : E4SFT5517

Test Mode : IEEE 802.11g CH6 TX 2437MHz

ANT 1

	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	27.48	3.26	35.07	90.66	86.33	74.00	-12.33	Peak
2	3006.00	28.40	3.60	37.17	52.53	47.36	74.00	26.64	Peak
3	4874.00	32.18	4.73	35.14	47.81	49.58	74.00	24.42	Peak
4	7311.00	36.78	6.09	33.31	31.99	41.55	74.00	32.45	Peak
5	10265.00	39.21	9.98	34.39	30.62	45.42	74.00	28.58	Peak
6	13444.00	41.18	9.59	32.59	30.55	48.73	74.00	25.27	Peak

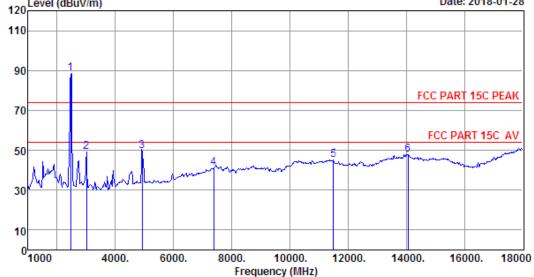
- 2. Margin= Limit Emission Level.
- The emission levels that are 20dB below the official limit are not reported.



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Data: 71 File: \\Emc-966-1\\test data\\2018\\RF\z\\Chunghsin Technology Group\\E4SFT5517.EM6 (122)

120 Level (dBuV/m) Date: 2018-01-28



Site no. : site Data no. : 71

Dis. / Ant. : 3m ANT9120D 1-18G Ant. pol. : HORIZONTAL

Limit : FCC PART 15C PEAK

Env. / Ins. : Temp:23.5'; Humi:51%; Press:101.52kPa

Engineer : Seven

EUT : 55 inch DLED SMART TV

Power : AC 120V/60Hz M/N : E4SFT5517

Test Mode : IEEE 802.11g CH11 TX 2462MHz

ANT 1

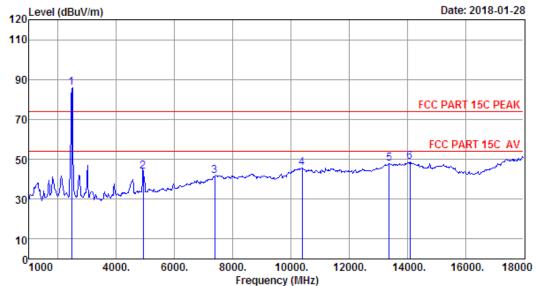
	Freq.	Ant. Factor (dB/m)	Cable Loss (dB)	Amp Factor (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	2462.00	27.52	3.27	35.14	92.85	88.50	74.00	-14.50	Peak
2	3006.00	28.40	3.60	37.17	54.23	49.06	74.00	24.94	Peak
3	4924.00	32.28	4.77	35.20	47.54	49.39	74.00	24.61	Peak
4	7386.00	36.97	6.12	33.17	31.15	41.07	74.00	32.93	Peak
5	11489.00	40.09	8.28	32.58	29.17	44.96	74.00	29.04	Peak
6	14056.00	41.65	10.13	32.95	29.17	48.00	74.00	26.00	Peak

- 2. Margin= Limit Emission Level.
- The emission levels that are 20dB below the official limit are not reported.



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Data: 72 File: \\Emc-966-1\\test data\\2018\\RF\z\\Chunghsin Technology Group\\E4SFT5517.EM6 (122)



Site no. : 1# 966 Chamber Data no. : 72
Dis. / Ant. : 3m ANT9120D 1-18G Ant. pol. : VERTICAL

Limit : FCC PART 15C PEAK

Env. / Ins. : Temp:23.5'; Humi:51%; Press:101.52kPa

Engineer : Seven

EUT : 55 inch DLED SMART TV

Power : AC 120V/60Hz M/N : E4SFT5517

Test Mode : IEEE 802.11g CH11 TX 2462MHz

ANT 1

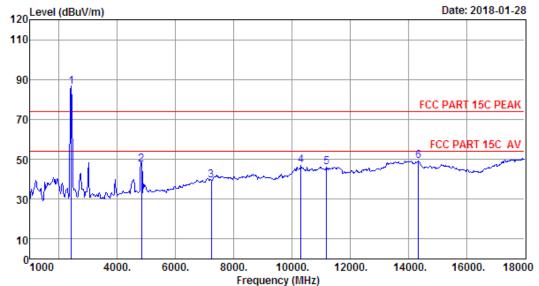
	Freq.	Ant. Factor (dB/m)	Cable Loss (dB)	Amp Factor (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	2462.00	27.52	3.27	35.14	90.05	85.70	74.00	-11.70	Peak
2	4924.00	32.28	4.77	35.20	42.14	43.99	74.00	30.01	Peak
3	7386.00	36.97	6.12	33.17	31.80	41.72	74.00	32.28	Peak
4	10384.00	39.25	10.00	34.26	30.68	45.67	74.00	28.33	Peak
5	13376.00	41.01	9.50	32.62	30.04	47.93	74.00	26.07	Peak
6	14090.00	41.61	10.14	32.99	29.84	48.60	74.00	25.40	Peak

- 2. Margin= Limit Emission Level.
- The emission levels that are 20dB below the official limit are not reported.



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Data: 73 File: \\Emc-966-1\\test data\\2018\\RF\z\\Chunghsin Technology Group\\E4SFT5517.EM6 (122)



Site no. : 1# 966 Chamber Data no. : 73
Dis. / Ant. : 3m ANT9120D 1-18G Ant. pol. : HORIZONTAL

Limit : FCC PART 15C PEAK

Env. / Ins. : Temp:23.5'; Humi:51%; Press:101.52kPa

Engineer : Seven

EUT : 55 inch DLED SMART TV

Power : AC 120V/60Hz M/N : E4SFT5517

Test Mode : IEEE 802.11n HT20 CH1 TX 2412MHz

ANT 1+2

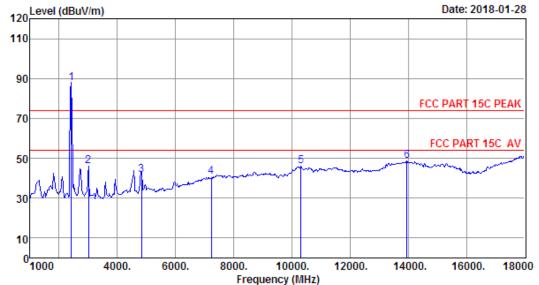
	Freq.	Ant. Factor (dB/m)	Cable Loss (dB)	Amp Factor (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	2412.00	27.39	3.23	34.94	90.68	86.36	74.00	-12.36	Peak
2	4824.00	32.09	4.69	35.08	45.59	47.29	74.00	26.71	Peak
3	7236.00	36.63	6.03	33.42	30.28	39.52	74.00	34.48	Peak
4	10316.00	39.23	10.20	34.34	31.63	46.72	74.00	27.28	Peak
5	11200.00	39.98	8.43	33.10	30.91	46.22	74.00	27.78	Peak
6	14345.00	41.36	10.18	33.31	31.01	49.24	74.00	24.76	Peak

- 2. Margin= Limit Emission Level.
- The emission levels that are 20dB below the official limit are not reported.



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Data: 74 File: \\Emc-966-1\test data\\2018\\RF\z\\Chunghsin Technology Group\\E4SFT5517.EM6 (122)



Site no. : 1# 966 Chamber Data no. : 74
Dis. / Ant. : 3m ANT9120D 1-18G Ant. pol. : VERTICAL

Limit : FCC PART 15C PEAK

Env. / Ins. : Temp:23.5'; Humi:51%; Press:101.52kPa

Engineer : Seven

EUT : 55 inch DLED SMART TV

Power : AC 120V/60Hz M/N : E4SFT5517

Test Mode : IEEE 802.11n HT20 CH1 TX 2412MHz

ANT 1+2

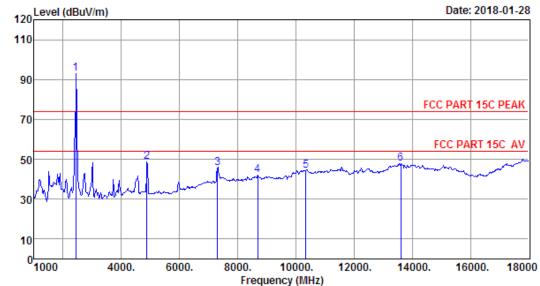
	Freq.	Ant. Factor (dB/m)	Cable Loss (dB)	Amp Factor (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	2412.00	27.39	3.23	34.94	92.05	87.73	74.00	-13.73	Peak
2	3006.00	28.40	3.60	37.17	51.30	46.13	74.00	27.87	Peak
3	4824.00	32.09	4.69	35.08	39.88	41.58	74.00	32.42	Peak
4	7236.00	36.63	6.03	33.42	31.69	40.93	74.00	33.07	Peak
5	10316.00	39.23	10.20	34.34	30.81	45.90	74.00	28.10	Peak
6	13954.00	41.66	10.12	32.84	29.78	48.72	74.00	25.28	Peak

- 2. Margin= Limit Emission Level.
- The emission levels that are 20dB below the official limit are not reported.



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Data: 75 File: \\Emc-966-1\\test data\\2018\\RF\z\\Chunghsin Technology Group\\E4SFT5517.EM6 (122)



Site no. : 1# 966 Chamber Data no. : 75
Dis. / Ant. : 3m ANT9120D 1-18G Ant. pol. : HORIZONTAL

Limit : FCC PART 15C PEAK

Env. / Ins. : Temp:23.5'; Humi:51%; Press:101.52kPa

Engineer : Seven

EUT : 55 inch DLED SMART TV

Power : AC 120V/60Hz M/N : E4SFT5517

Test Mode : IEEE 802.11n HT20 CH6 TX 2437MHz

ANT 1+2

	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	27.48	3.26	35.07	97.22	92.89	74.00	-18.89	Peak
2	4874.00	32.18	4.73	35.14	47.13	48.90	74.00	25.10	Peak
3	7311.00	36.78	6.09	33.31	36.23	45.79	74.00	28.21	Peak
4	8684.00	37.46	6.90	33.06	30.60	41.90	74.00	32.10	Peak
5	10350.00	39.24	10.10	34.30	29.29	44.33	74.00	29.67	Peak
6	13614.00	41.39	9.82	32.59	29.26	47.88	74.00	26.12	Peak

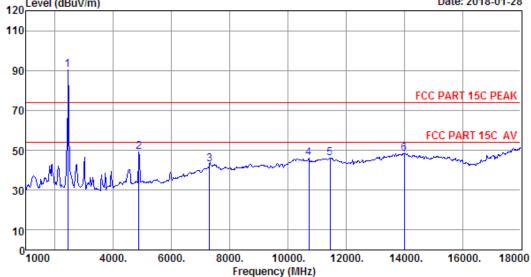
- 2. Margin= Limit Emission Level.
- The emission levels that are 20dB below the official limit are not reported.



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Data: 76 File: \\Emc-966-1\\test data\\2018\\RF\\z\\Chunghsin Technology Group\\E4SFT5517.EM6 (122)

120 Level (dBuV/m) Date: 2018-01-28



Site no. : 1# 966 Chamber Data no. : 76
Dis. / Ant. : 3m ANT9120D 1-18G Ant. pol. : VERTICAL

Limit : FCC PART 15C PEAK

Env. / Ins. : Temp:23.5'; Humi:51%; Press:101.52kPa

Engineer : Seven

EUT : 55 inch DLED SMART TV

Power : AC 120V/60Hz M/N : E4SFT5517

Test Mode : IEEE 802.11n HT20 CH6 TX 2437MHz

ANT 1+2

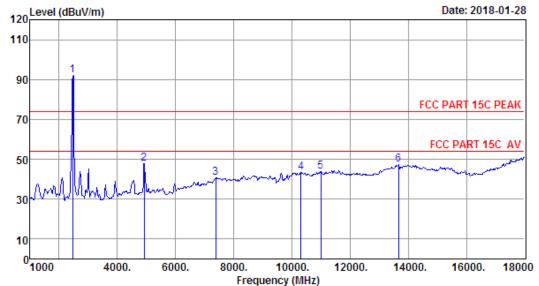
	Freq.	Ant. Factor (dB/m)	Cable Loss (dB)	Amp Factor (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	2437.00	27.48	3.26	35.07	94.60	90.27	74.00	-16.27	Peak
2	4874.00	32.18	4.73	35.14	47.58	49.35	74.00	24.65	Peak
3	7311.00	36.78	6.09	33.31	33.35	42.91	74.00	31.09	Peak
4	10724.00	39.57	9.00	33.82	31.14	45.89	74.00	28.11	Peak
5	11455.00	40.08	8.28	32.62	30.46	46.20	74.00	27.80	Peak
6	14005.00	41.70	10.13	32.88	29.42	48.37	74.00	25.63	Peak

- 2. Margin= Limit Emission Level.
- The emission levels that are 20dB below the official limit are not reported.



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Data: 77 File: \\Emc-966-1\\test data\\2018\\RF\z\\Chunghsin Technology Group\\E4SFT5517.EM6 (122)



Site no. : 1# 966 Chamber Data no. : 77
Dis. / Ant. : 3m ANT9120D 1-18G Ant. pol. : VERTICAL

Limit : FCC PART 15C PEAK

Env. / Ins. : Temp:23.5'; Humi:51%; Press:101.52kPa

Engineer : Seven

EUT : 55 inch DLED SMART TV

Power : AC 120V/60Hz M/N : E4SFT5517

Test Mode : IEEE 802.11n HT20 CH11 TX 2462MHz

ANT 1+2

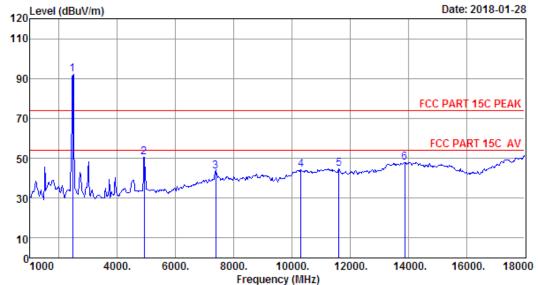
	Freq.	Ant. Factor (dB/m)	Cable Loss (dB)	Amp Factor (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	2462.00	27.52	3.27	35.14	96.54	92.19	74.00	-18.19	Peak
2	4924.00	32.28	4.77	35.20	45.98	47.83	74.00	26.17	Peak
3	7386.00	36.97	6.12	33.17	30.85	40.77	74.00	33.23	Peak
4	10316.00	39.23	10.20	34.34	28.45	43.54	74.00	30.46	Peak
5	10996.00	39.90	8.57	33.45	28.76	43.78	74.00	30.22	Peak
6	13665.00	41.43	9.89	32.62	28.87	47.57	74.00	26.43	Peak

- 2. Margin= Limit Emission Level.
- The emission levels that are 20dB below the official limit are not reported.



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Data: 78 File: \\Emc-966-1\test data\2018\RF\z\Chunghsin Technology Group\E4SFT5517.EM6 (122)



Site no. : 1# 966 Chamber Data no. : 78 Ant. pol. : HORIZONTAL

Dis. / Ant. : 3m ANT9120D 1-18G : FCC PART 15C PEAK

Env. / Ins. : Temp:23.5';Humi:51%;Press:101.52kPa

Engineer : Seven

: 55 inch DLED SMART TV EUT

: AC 120V/60Hz Power M/N : E4SFT5517

: IEEE 802.11n HT20 CH11 TX 2462MHz Test Mode

ANT 1+2

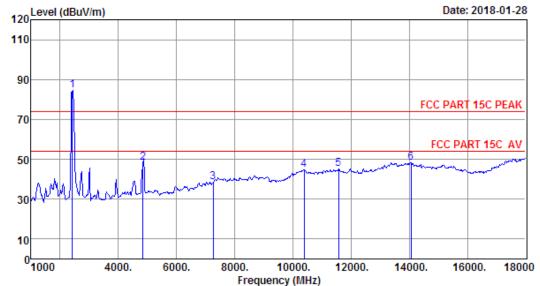
	Freq.	Ant. Factor (dB/m)	Cable Loss (dB)	Amp Factor (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	2462.00	27.52	3.27	35.14	96.50	92.15	74.00	-18.15	Peak
2	4924.00	32.28	4.77	35.20	48.70	50.55	74.00	23.45	Peak
3	7386.00	36.97	6.12	33.17	33.48	43.40	74.00	30.60	Peak
4	10316.00	39.23	10.20	34.34	29.03	44.12	74.00	29.88	Peak
5	11625.00	39.93	8.25	32.37	28.89	44.70	74.00	29.30	Peak
6	13886.00	41.61	10.11	32.80	29.03	47.95	74.00	26.05	Peak

- 2. Margin= Limit Emission Level.
- 3. The emission levels that are 20dB below the official limit are not reported.



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Data: 79 File: \\Emc-966-1\\test data\\2018\\RF\z\\Chunghsin Technology Group\\E4SFT5517.EM6 (122)



Site no. : 1# 966 Chamber Data no. : 79
Dis. / Ant. : 3m ANT9120D 1-18G Ant. pol. : VERTICAL

Limit : FCC PART 15C PEAK

Env. / Ins. : Temp:23.5'; Humi:51%; Press:101.52kPa

Engineer : Seven

EUT : 55 inch DLED SMART TV

Power : AC 120V/60Hz M/N : E4SFT5517

Test Mode : IEEE 802.11n HT40 CH3 TX 2422MHz

ANT 1+2

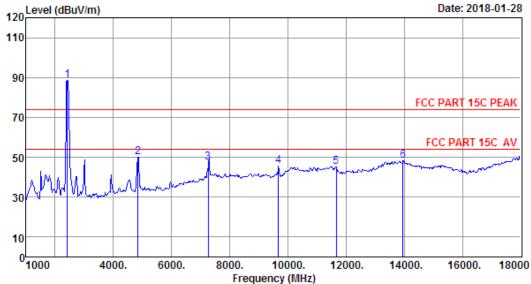
	Freq.	Ant. Factor (dB/m)	Cable Loss (dB)	Amp Factor (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	2422.00	27.43	3.24	35.00	88.76	84.43	74.00	-10.43	Peak
2	4844.00	32.12	4.70	35.10	46.62	48.34	74.00	25.66	Peak
3	7266.00	36.71	6.05	33.36	29.28	38.68	74.00	35.32	Peak
4	10384.00	39.25	10.00	34.26	29.68	44.67	74.00	29.33	Peak
5	11574.00	40.00	8.26	32.42	29.42	45.26	74.00	28.74	Peak
6	14056.00	41.65	10.13	32.95	29.61	48.44	74.00	25.56	Peak

- 2. Margin= Limit Emission Level.
- The emission levels that are 20dB below the official limit are not reported.



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Data: 80 File: \\Emc-966-1\\test data\\2018\\RF\\z\\Chunghsin Technology Group\\E4SFT5517.EM6 (122)



Site no. : 1# 966 Chamber Data no. : 80
Dis. / Ant. : 3m ANT9120D 1-18G Ant. pol. : HORIZONTAL

Limit : FCC PART 15C PEAK

Env. / Ins. : Temp:23.5'; Humi:51%; Press:101.52kPa

Engineer : Seven

EUT : 55 inch DLED SMART TV

Power : AC 120V/60Hz M/N : E4SFT5517

Test Mode : IEEE 802.11n HT40 CH3 TX 2422MHz

ANT 1+2

	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	27.43	3.24	35.00	92.95	88.62	74.00	-14.62	Peak
2	4844.00	32.12	4.70	35.10	48.30	50.02	74.00	23.98	Peak
3	7266.00	36.71	6.05	33.36	38.04	47.44	74.00	26.56	Peak
4	9670.00	38.90	7.78	35.31	34.14	45.51	74.00	28.49	Peak
5	11659.00	39.88	8.25	32.38	29.49	45.24	74.00	28.76	Peak
6	13954.00	41.66	10.12	32.84	29.29	48.23	74.00	25.77	Peak

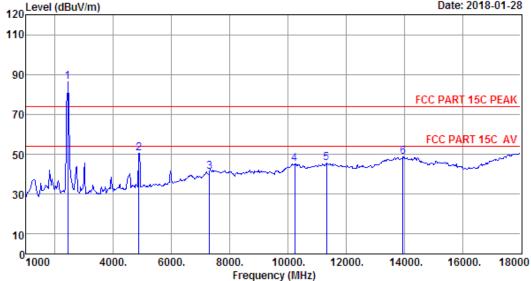
- 2. Margin= Limit Emission Level.
- The emission levels that are 20dB below the official limit are not reported.



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Data: 81 File: \\Emc-966-1\test data\\2018\\RF\z\\Chunghsin Technology Group\\E4SFT5517.EM6 (122)

Level (dBuV/m) Date: 2018-01-28



Site no. : 1# 966 Chamber Data no. : 81
Dis. / Ant. : 3m ANT9120D 1-18G Ant. pol. : VERTICAL

Limit : FCC PART 15C PEAK

Env. / Ins. : Temp:23.5'; Humi:51%; Press:101.52kPa

Engineer : Seven

EUT : 55 inch DLED SMART TV

Power : AC 120V/60Hz M/N : E4SFT5517

Test Mode : IEEE 802.11n HT40 CH6 TX 2437MHz

ANT 1+2

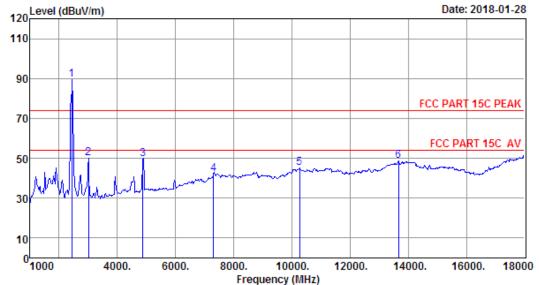
		Freq.	Ant. Factor (dB/m)	Cable Loss (dB)	Amp Factor (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1		2437.00	27.48	3.26	35.07	90.87	86.54	74.00	-12.54	Peak
2	2	4874.00	32.18	4.73	35.14	48.74	50.51	74.00	23.49	Peak
3	3	7311.00	36.78	6.09	33.31	31.83	41.39	74.00	32.61	Peak
4		10231.00	39.19	9.84	34.41	30.63	45.25	74.00	28.75	Peak
5	5	11336.00	40.03	8.32	32.84	30.29	45.80	74.00	28.20	Peak
6	5	13954.00	41.66	10.12	32.84	29.98	48.92	74.00	25.08	Peak

- 2. Margin= Limit Emission Level.
- The emission levels that are 20dB below the official limit are not reported.



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Data: 82 File: \\Emc-966-1\test data\2018\RF\z\Chunghsin Technology Group\E4SFT5517.EM6 (122)



Site no. : 1# 966 Chamber

Data no. : 82 Ant. pol. : HORIZONTAL Dis. / Ant. : 3m ANT9120D 1-18G

: FCC PART 15C PEAK

Env. / Ins. : Temp:23.5';Humi:51%;Press:101.52kPa

Engineer : Seven

: 55 inch DLED SMART TV EUT

: AC 120V/60Hz Power M/N : E4SFT5517

: IEEE 802.11n HT40 CH6 TX 2437MHz Test Mode

ANT 1+2

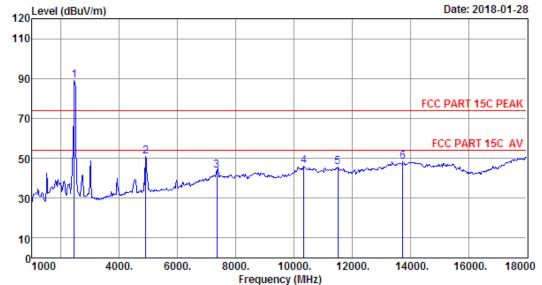
	Freq.	Ant. Factor (dB/m)	Cable Loss (dB)	Amp Factor (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	2437.00	27.48	3.26	35.07	93.81	89.48	74.00	-15.48	Peak
2	3006.00	28.40	3.60	37.17	55.32	50.15	74.00	23.85	Peak
3	4874.00	32.18	4.73	35.14	47.76	49.53	74.00	24.47	Peak
4	7311.00	36.78	6.09	33.31	32.66	42.22	74.00	31.78	Peak
5	10265.00	39.21	9.98	34.39	30.23	45.03	74.00	28.97	Peak
6	13665.00	41.43	9.89	32.62	30.05	48.75	74.00	25.25	Peak

- 2. Margin= Limit Emission Level.
- 3. The emission levels that are 20dB below the official limit are not reported.



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Data: 83 File: \\Emc-966-1\test data\\2018\\RF\z\\Chunghsin Technology Group\\E4SFT5517.EM6 (122)



Site no. : 1# 966 Chamber Data no. : 83
Dis. / Ant. : 3m ANT9120D 1-18G Ant. pol. : HORIZONTAL

Limit : FCC PART 15C PEAK

Env. / Ins. : Temp:23.5'; Humi:51%; Press:101.52kPa

Engineer : Seven

EUT : 55 inch DLED SMART TV

Power : AC 120V/60Hz M/N : E4SFT5517

Test Mode : IEEE 802.11n HT40 CH9 TX 2452MHz

ANT 1+2

	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	27.48	3.26	35.07	93.35	89.02	74.00	-15.02	Peak
2	4904.00	32.24	4.76	35.18	49.00	50.82	74.00	23.18	Peak
3	7356.00	36.90	6.11	33.22	34.02	43.81	74.00	30.19	Peak
4	10350.00	39.24	10.10	34.30	31.02	46.06	74.00	27.94	Peak
5	11506.00	40.10	8.28	32.55	29.71	45.54	74.00	28.46	Peak
6	13750.00	41.50	10.01	32.69	29.37	48.19	74.00	25.81	Peak

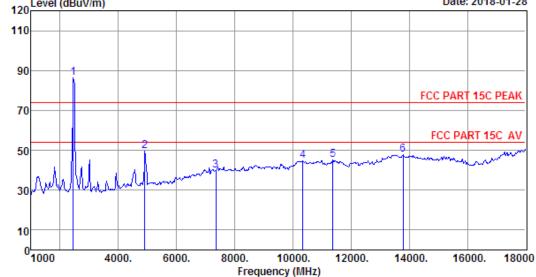
- 2. Margin= Limit Emission Level.
- The emission levels that are 20dB below the official limit are not reported.



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Data: 84 File: \\Emc-966-1\\test data\\2018\\RF\\z\\Chunghsin Technology Group\\E4SFT5517.EM6 (122)

120 Level (dBuV/m) Date: 2018-01-28



Site no. : 1# 966 Chamber Data no. : 84
Dis. / Ant. : 3m ANT9120D 1-18G Ant. pol. : VERTICAL

Limit : FCC PART 15C PEAK

Env. / Ins. : Temp:23.5'; Humi:51%; Press:101.52kPa

Engineer : Seven

EUT : 55 inch DLED SMART TV

Power : AC 120V/60Hz M/N : E4SFT5517

Test Mode : IEEE 802.11n HT40 CH9 TX 2452MHz

ANT 1+2

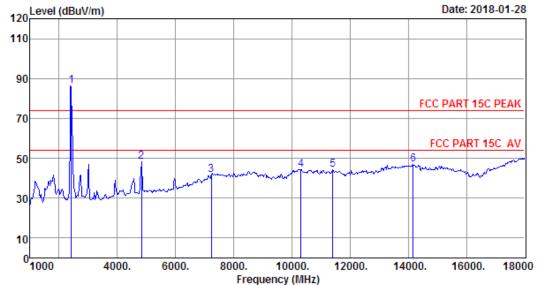
	Freq.	Ant. Factor (dB/m)	Cable Loss (dB)	Amp Factor (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	2452.00	27.48	3.26	35.07	90.68	86.35	74.00	-12.35	Peak
2	4904.00	32.24	4.76	35.18	47.78	49.60	74.00	24.40	Peak
3	7356.00	36.90	6.11	33.22	30.23	40.02	74.00	33.98	Peak
4	10350.00	39.24	10.10	34.30	29.74	44.78	74.00	29.22	Peak
5	11370.00	40.05	8.30	32.78	29.59	45.16	74.00	28.84	Peak
6	13784.00	41.53	10.05	32.72	28.75	47.61	74.00	26.39	Peak

- 2. Margin= Limit Emission Level.
- The emission levels that are 20dB below the official limit are not reported.



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Data: 85 File: \\Emc-966-1\test data\\2018\\RF\z\\Chunghsin Technology Group\\E4SFT5517.EM6 (122)



Site no. : 1# 966 Chamber Data no. : 85
Dis. / Ant. : 3m ANT9120D 1-18G Ant. pol. : VERTICAL

Limit : FCC PART 15C PEAK

Env. / Ins. : Temp:23.5'; Humi:51%; Press:101.52kPa

Engineer : Seven

EUT : 55 inch DLED SMART TV

Power : AC 120V/60Hz M/N : E4SFT5517

Test Mode : IEEE 802.11b CH1 TX 2412MHz

ANT 2

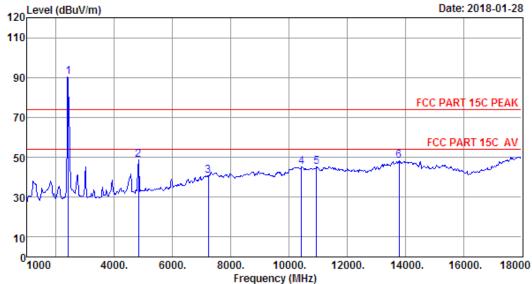
	Ant.		Cable	Amp		Emission			
	Freq. (MHz)	•	Loss (dB)	Factor (dB)	Reading (dBuV)	Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	2412.00	27.39	3.23	34.94	90.52	86.20	74.00	-12.20	Peak
2	4824.00	32.09	4.69	35.08	46.56	48.26	74.00	25.74	Peak
3	7236.00	36.63	6.03	33.42	32.51	41.75	74.00	32.25	Peak
4	10316.00	39.23	10.20	34.34	29.14	44.23	74.00	29.77	Peak
5	11404.00	40.06	8.29	32.71	28.58	44.22	74.00	29.78	Peak
6	14175.00	41.53	10.15	33.11	28.21	46.78	74.00	27.22	Peak

- 2. Margin= Limit Emission Level.
- The emission levels that are 20dB below the official limit are not reported.



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Data: 86 File: \\Emc-966-1\test data\\2018\\RF\\z\\Chunghsin Technology Group\\E4SFT5517.EM6 (122)



Site no. : 1# 966 Chamber Data no. : 86
Dis. / Ant. : 3m ANT9120D 1-18G Ant. pol. : HORIZONTAL

Limit : FCC PART 15C PEAK

Env. / Ins. : Temp:23.5'; Humi:51%; Press:101.52kPa

Engineer : Seven

EUT : 55 inch DLED SMART TV

Power : AC 120V/60Hz M/N : E4SFT5517

Test Mode : IEEE 802.11b CH1 TX 2412MHz

ANT 2

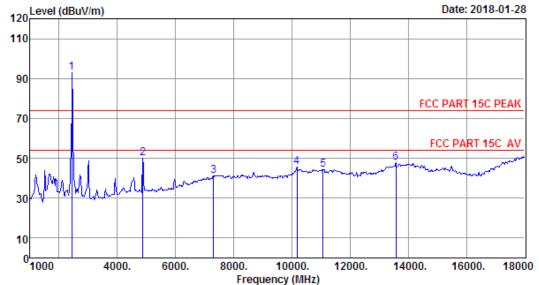
	Freq.	Ant. Factor (dB/m)	Cable Loss (dB)	Amp Factor (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	2412.00	27.39	3.23	34.94	94.65	90.33	74.00	-16.33	Peak
2	4824.00	32.09	4.69	35.08	47.09	48.79	74.00	25.21	Peak
3	7236.00	36.63	6.03	33.42	31.53	40.77	74.00	33.23	Peak
4	10435.00	39.27	9.85	34.20	30.15	45.07	74.00	28.93	Peak
5	10945.00	39.84	8.61	33.52	30.35	45.28	74.00	28.72	Peak
6	13784.00	41.53	10.05	32.72	29.36	48.22	74.00	25.78	Peak

- 2. Margin= Limit Emission Level.
- The emission levels that are 20dB below the official limit are not reported.



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Data: 87 File: \\Emc-966-1\test data\2018\RF\z\Chunghsin Technology Group\E4SFT5517.EM6 (122)



Site no. : 1# 966 Chamber

Data no. : 87 Ant. pol. : HORIZONTAL Dis. / Ant. : 3m ANT9120D 1-18G

: FCC PART 15C PEAK

Env. / Ins. : Temp:23.5';Humi:51%;Press:101.52kPa

Engineer : Seven

: 55 inch DLED SMART TV EUT

: AC 120V/60Hz Power M/N : E4SFT5517

Test Mode : IEEE 802.11b CH6 TX 2437MHz

ANT 2

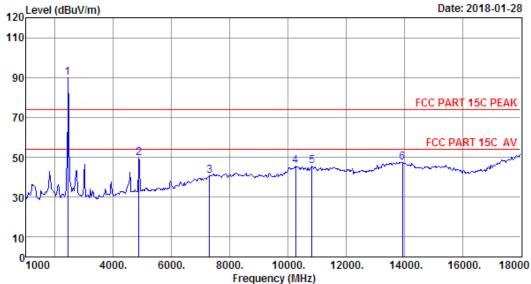
	Freq.	Ant. Factor (dB/m)	Cable Loss (dB)	Amp Factor (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	2437.00	27.48	3.26	35.07	97.41	93.08	74.00	-19.08	Peak
2	4874.00	32.18	4.73	35.14	48.30	50.07	74.00	23.93	Peak
3	7311.00	36.78	6.09	33.31	31.58	41.14	74.00	32.86	Peak
4	10180.00	39.17	9.62	34.47	31.20	45.52	74.00	28.48	Peak
5	11064.00	39.93	8.52	33.32	29.27	44.40	74.00	29.60	Peak
6	13580.00	41.37	9.78	32.57	29.04	47.62	74.00	26.38	Peak

- 2. Margin= Limit Emission Level.
- 3. The emission levels that are 20dB below the official limit are not reported.



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Data: 88 File: \\Emc-966-1\\test data\\2018\\RF\\z\\Chunghsin Technology Group\\E4SFT5517.EM6 (122)



Site no. : 1# 966 Chamber Data no. : 88
Dis. / Ant. : 3m ANT9120D 1-18G Ant. pol. : VERTICAL

Limit : FCC PART 15C PEAK

Env. / Ins. : Temp:23.5'; Humi:51%; Press:101.52kPa

Engineer : Seven

EUT : 55 inch DLED SMART TV

Power : AC 120V/60Hz M/N : E4SFT5517

Test Mode : IEEE 802.11b CH6 TX 2437MHz

ANT 2

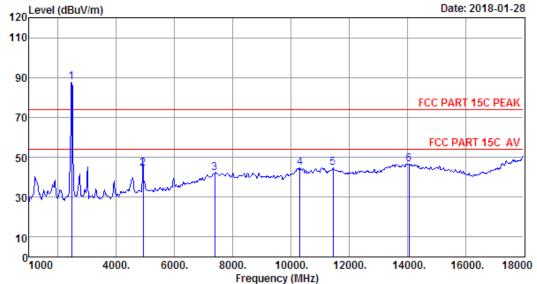
	Freq.	Ant. Factor (dB/m)	Cable Loss (dB)	Amp Factor (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	2437.00	27.48	3.26	35.07	94.42	90.09	74.00	-16.09	Peak
2	4874.00	32.18	4.73	35.14	47.87	49.64	74.00	24.36	Peak
3	7311.00	36.78	6.09	33.31	31.05	40.61	74.00	33.39	Peak
4	10265.00	39.21	9.98	34.39	30.62	45.42	74.00	28.58	Peak
5	10826.00	39.69	8.70	33.67	30.92	45.64	74.00	28.36	Peak
6	13937.00	41.65	10.12	32.83	28.50	47.44	74.00	26.56	Peak

- 2. Margin= Limit Emission Level.
- The emission levels that are 20dB below the official limit are not reported.



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Data: 89 File: \\Emc-966-1\test data\\2018\\RF\z\\Chunghsin Technology Group\\E4SFT5517.EM6 (122)



Site no. : 1# 966 Chamber Data no. : 89
Dis. / Ant. : 3m ANT9120D 1-18G Ant. pol. : VERTICAL

Limit : FCC PART 15C PEAK

Env. / Ins. : Temp:23.5'; Humi:51%; Press:101.52kPa

Engineer : Seven

EUT : 55 inch DLED SMART TV

Power : AC 120V/60Hz M/N : E4SFT5517

Test Mode : IEEE 802.11b CH11 TX 2462MHz

ANT 2

	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	27.52	3.27	35.14	91.81	87.46	74.00	-13.46	Peak
2	4924.00	32.28	4.77	35.20	42.49	44.34	74.00	29.66	Peak
3	7386.00	36.97	6.12	33.17	32.15	42.07	74.00	31.93	Peak
4	10316.00	39.23	10.20	34.34	29.60	44.69	74.00	29.31	Peak
5	11455.00	40.08	8.28	32.62	29.00	44.74	74.00	29.26	Peak
6	14056.00	41.65	10.13	32.95	27.70	46.53	74.00	27.47	Peak

- 2. Margin= Limit Emission Level.
- The emission levels that are 20dB below the official limit are not reported.



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Data: 90 File: \\Emc-966-1\test data\2018\RF\z\Chunghsin Technology Group\E4SFT5517.EM6 (122) Date: 2018-01-28 110 90 FCC PART 15C PEAK 70 FCC PART 15C AV 50 1000 4000. 6000. 8000. 10000. 12000. 14000. 16000. 18000

Frequency (MHz)

Site no. : 1# 966 Chamber Data no. : 90
Dis. / Ant. : 3m ANT9120D 1-18G Ant. pol. : HORIZONTAL

Limit : FCC PART 15C PEAK

Env. / Ins. : Temp:23.5'; Humi:51%; Press:101.52kPa

Engineer : Seven

EUT : 55 inch DLED SMART TV

Power : AC 120V/60Hz M/N : E4SFT5517

Test Mode : IEEE 802.11b CH11 TX 2462MHz

ANT 2

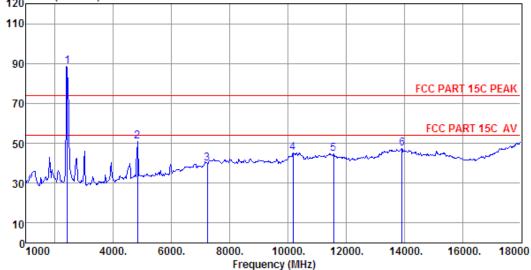
	Freq.	Ant. Factor (dB/m)	Cable Loss (dB)	Amp Factor (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	2462.00	27.52	3.27	35.14	95.52	91.17	74.00	-17.17	Peak
2	3006.00	28.40	3.60	37.17	53.74	48.57	74.00	25.43	Peak
3	4924.00	32.28	4.77	35.20	45.80	47.65	74.00	26.35	Peak
4	7386.00	36.97	6.12	33.17	30.27	40.19	74.00	33.81	Peak
5	10350.00	39.24	10.10	34.30	29.98	45.02	74.00	28.98	Peak
6	14056.00	41.65	10.13	32.95	28.61	47.44	74.00	26.56	Peak

- 2. Margin= Limit Emission Level.
- The emission levels that are 20dB below the official limit are not reported.



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Data: 91 File: \\Emc-966-1\test data\2018\RF\z\Chunghsin Technology Group\E4SFT5517.EM6 (122) Date: 2018-01-28 110



Data no. : 91 Site no. : 1# 966 Chamber Ant. pol. : VERTICAL Dis. / Ant. : 3m ANT9120D 1-18G

: FCC PART 15C PEAK

Env. / Ins. : Temp:23.5';Humi:51%;Press:101.52kPa

Engineer : Seven

: 55 inch DLED SMART TV EUT

: AC 120V/60Hz Power M/N : E4SFT5517

Test Mode : IEEE 802.11g CH1 TX 2412MHz

ANT 2

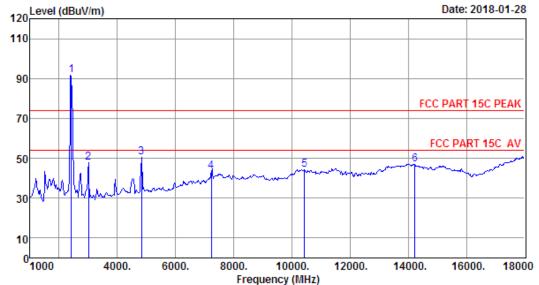
	Freq.	Ant. Factor (dB/m)	Cable Loss (dB)	Amp Factor (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	2412.00	27.39	3.23	34.94	92.93	88.61	74.00	-14.61	Peak
2	4824.00	32.09	4.69	35.08	49.38	51.08	74.00	22.92	Peak
3	7236.00	36.63	6.03	33.42	30.71	39.95	74.00	34.05	Peak
4	10180.00	39.17	9.62	34.47	30.93	45.25	74.00	28.75	Peak
5	11574.00	40.00	8.26	32.42	28.91	44.75	74.00	29.25	Peak
6	13920.00	41.63	10.11	32.83	28.44	47.35	74.00	26.65	Peak

- 2. Margin= Limit Emission Level.
- 3. The emission levels that are 20dB below the official limit are not reported.



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Data: 92 File: \\Emc-966-1\test data\\2018\\RF\z\\Chunghsin Technology Group\\E4SFT5517.EM6 (122)



Site no. : 1# 966 Chamber Data no. : 92
Dis. / Ant. : 3m ANT9120D 1-18G Ant. pol. : HORIZONTAL

Limit : FCC PART 15C PEAK

Env. / Ins. : Temp:23.5'; Humi:51%; Press:101.52kPa

Engineer : Seven

EUT : 55 inch DLED SMART TV

Power : AC 120V/60Hz M/N : E4SFT5517

Test Mode : IEEE 802.11g CH1 TX 2412MHz

ANT 2

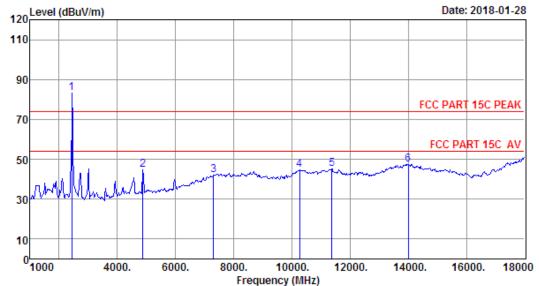
	Freq.	Ant. Factor (dB/m)	Cable Loss (dB)	Amp Factor (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	2412.00	27.39	3.23	34.94	95.82	91.50	74.00	-17.50	Peak
2	3006.00	28.40	3.60	37.17	53.05	47.88	74.00	26.12	Peak
3	4824.00	32.09	4.69	35.08	48.89	50.59	74.00	23.41	Peak
4	7236.00	36.63	6.03	33.42	34.06	43.30	74.00	30.70	Peak
5	10435.00	39.27	9.85	34.20	29.51	44.43	74.00	29.57	Peak
6	14226.00	41.48	10.16	33.18	28.40	46.86	74.00	27.14	Peak

- 2. Margin= Limit Emission Level.
- The emission levels that are 20dB below the official limit are not reported.



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Data: 93 File: \\Emc-966-1\\test data\\2018\\RF\z\\Chunghsin Technology Group\\E4SFT5517.EM6 (122)



Site no. : 1# 966 Chamber Data no. : 93
Dis. / Ant. : 3m ANT9120D 1-18G Ant. pol. : VERTICAL

Limit : FCC PART 15C PEAK

Env. / Ins. : Temp:23.5'; Humi:51%; Press:101.52kPa

Engineer : Seven

EUT : 55 inch DLED SMART TV

Power : AC 120V/60Hz M/N : E4SFT5517

Test Mode : IEEE 802.11g CH6 TX 2437MHz

ANT 2

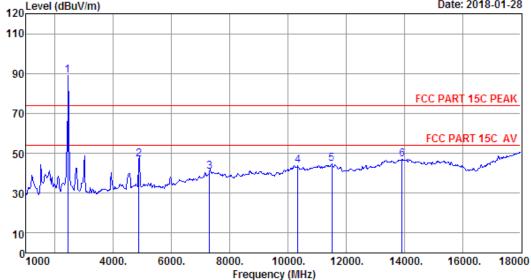
		Freq.	Ant. Factor (dB/m)	Cable Loss (dB)	Amp Factor (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
	1	2437.00	27.48	3.26	35.07	87.43	83.10	74.00	-9.10	Peak
- 2	2	4874.00	32.18	4.73	35.14	42.77	44.54	74.00	29.46	Peak
	3	7311.00	36.78	6.09	33.31	32.37	41.93	74.00	32.07	Peak
4	4	10265.00	39.21	9.98	34.39	29.82	44.62	74.00	29.38	Peak
	5	11370.00	40.05	8.30	32.78	29.55	45.12	74.00	28.88	Peak
(6	14005.00	41.70	10.13	32.88	28.45	47.40	74.00	26.60	Peak

- 2. Margin= Limit Emission Level.
- The emission levels that are 20dB below the official limit are not reported.



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Data: 94 File: \\Emc-966-1\test data\2018\RF\z\Chunghsin Technology Group\E4SFT5517.EM6 (122) Date: 2018-01-28



Site no. : 1# 966 Chamber

Data no. : 94 Ant. pol. : HORIZONTAL Dis. / Ant. : 3m ANT9120D 1-18G

: FCC PART 15C PEAK

Env. / Ins. : Temp:23.5';Humi:51%;Press:101.52kPa

Engineer : Seven

: 55 inch DLED SMART TV EUT

: AC 120V/60Hz Power M/N : E4SFT5517

Test Mode : IEEE 802.11g CH6 TX 2437MHz

ANT 2

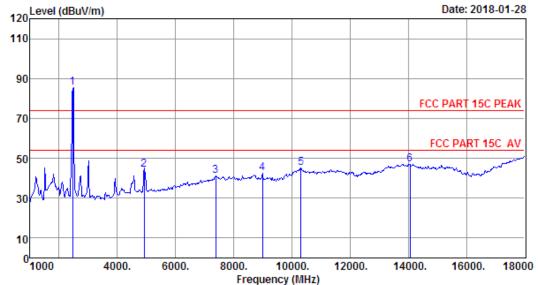
	Freq.	Ant. Factor (dB/m)	Cable Loss (dB)	Amp Factor (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	2437.00	27.48	3.26	35.07	93.38	89.05	74.00	-15.05	Peak
2	4874.00	32.18	4.73	35.14	45.18	46.95	74.00	27.05	Peak
3	7311.00	36.78	6.09	33.31	31.17	40.73	74.00	33.27	Peak
4	10350.00	39.24	10.10	34.30	28.83	43.87	74.00	30.13	Peak
5	11506.00	40.10	8.28	32.55	28.88	44.71	74.00	29.29	Peak
6	13920.00	41.63	10.11	32.83	28.08	46.99	74.00	27.01	Peak

- 2. Margin= Limit Emission Level.
- 3. The emission levels that are 20dB below the official limit are not reported.



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Data: 95 File: \\Emc-966-1\test data\\2018\\RF\z\\Chunghsin Technology Group\\E4SFT5517.EM6 (122)



Site no. : 1# 966 Chamber Data no. : 95
Dis. / Ant. : 3m ANT9120D 1-18G Ant. pol. : HORIZONTAL

Limit : FCC PART 15C PEAK

Env. / Ins. : Temp:23.5'; Humi:51%; Press:101.52kPa

Engineer : Seven

EUT : 55 inch DLED SMART TV

Power : AC 120V/60Hz M/N : E4SFT5517

Test Mode : IEEE 802.11g CH11 TX 2462MHz

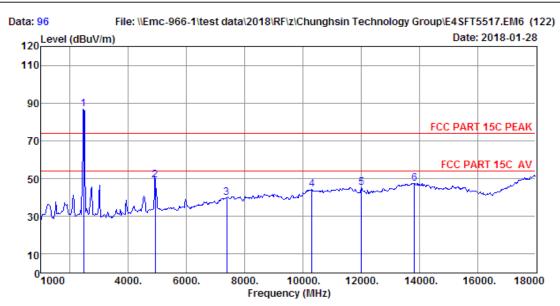
ANT 2

	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	27.52	3.27	35.14	89.99	85.64	74.00	-11.64	Peak
2	4924.00	32.28	4.77	35.20	42.45	44.30	74.00	29.70	Peak
3	7386.00	36.97	6.12	33.17	31.18	41.10	74.00	32.90	Peak
4	8990.00	37.88	6.94	33.62	31.28	42.48	74.00	31.52	Peak
5	10316.00	39.23	10.20	34.34	30.00	45.09	74.00	28.91	Peak
6	14056.00	41.65	10.13	32.95	28.21	47.04	74.00	26.96	Peak

- 2. Margin= Limit Emission Level.
- The emission levels that are 20dB below the official limit are not reported.



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Site no. : 1# 966 Chamber Data no. : 96
Dis. / Ant. : 3m ANT9120D 1-18G Ant. pol. : VERTICAL

Limit : FCC PART 15C PEAK

Env. / Ins. : Temp:23.5'; Humi:51%; Press:101.52kPa

Engineer : Seven

EUT : 55 inch DLED SMART TV

Power : AC 120V/60Hz M/N : E4SFT5517

Test Mode : IEEE 802.11g CH11 TX 2462MHz

ANT 2

	Freq	Ant. Freg. Factor	Cable	Amp	Reading	Emission Level	Limits	Margin	Remark
	(MHz)	(dB/m)	(dB)	(dB)	(dBuV)	(dBuV/m)	(dBuV/m)	(dB)	
1	2462.00	27.52	3.27	35.14	90.97	86.62	74.00	-12.62	Peak
2	4924.00	32.28	4.77	35.20	47.30	49.15	74.00	24.85	Peak
3	7386.00	36.97	6.12	33.17	30.02	39.94	74.00	34.06	Peak
4	10316.00	39.23	10.20	34.34	28.98	44.07	74.00	29.93	Peak
5	12016.00	39.40	8.26	32.53	30.24	45.37	74.00	28.63	Peak
6	13835.00	41.57	10.10	32.76	28.64	47.55	74.00	26.45	Peak

- 2. Margin= Limit Emission Level.
- The emission levels that are 20dB below the official limit are not reported.



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.



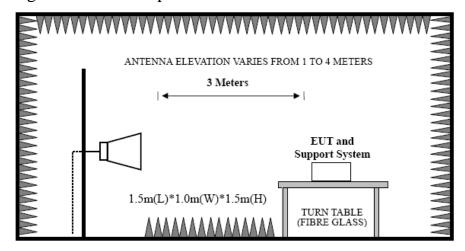
Report No. ESTE-R1801079

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 Block Diagram of Test setup



5.3 Test Procedure

EUT was placed on a turn table, which is 1.5 m 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. Both horizontal and vertical polarization of the antenna are set on test.

Set the spectrum analyzer in the following setting in order to capture the lower and upper band-edges of emissions

Peak: RBW = 1MHz, VBW = 1MHz, Detector=PEAK detector, Sweep time = auto. AV: RBW = 1MHz, VBW = 10Hz, Detector=PEAK detector, Sweep time = auto.

5.4 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 2412 MHz . 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.

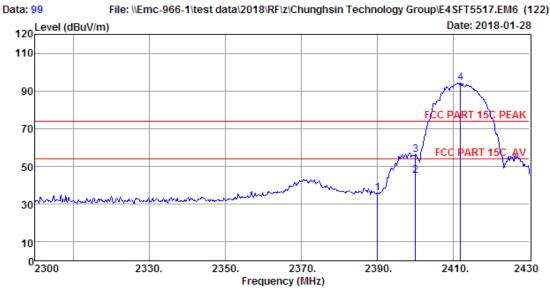
Report No. ESTE-R1801079



5.5 Test Data

EST Technology

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Site no. : 1# 966 Chamber Data no. : 99

Dis. / Ant. : 3m ANT9120D 1-18G Ant. pol. : HORIZONTAL

Limit : FCC PART 15C PEAK

Env. / Ins. : Temp:23.5'; Humi:51%; Press:101.52kPa

Engineer : Seven

EUT : 55 inch DLED SMART TV

Power : AC 120V/60Hz M/N : E4SFT5517

Test Mode : IEEE 802.11b CH1 TX 2412MHz

ANT 1

	Freq. (MHz)		Cable Loss (dB)	-	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	2390.00	27.35	3.21	0.00	5.49	36.05	74.00	37.95	Peak
2	2400.00	27.35	3.21	0.00	14.66	45.22	54.00	8.78	Average
3	2400.00	27.35	3.21	0.00	25.66	56.22	74.00	17.78	Peak
4	2411.80	27.39	3.23	0.00	63.86	94.48	74.00	-20.48	Peak

- 2. Margin= Limit Emission Level.
- The emission levels that are 20dB below the official limit are not reported.



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Data: 100 File: \\Emc-966-1\test data\2018\RF\z\Chunghsin Technology Group\E4SFT5517.EM6 (122) Date: 2018-01-28 Level (dBuV/m) 110 90 70 50 0²³⁰⁰ 2330. 2350. 2370. 2390. 2410. 2430 Frequency (MHz)

Site no. : 1# 966 Chamber Data no. : 100
Dis. / Ant. : 3m ANT9120D 1-18G Ant. pol. : VERTICAL

Limit : FCC PART 15C PEAK

Env. / Ins. : Temp:23.5'; Humi:51%; Press:101.52kPa

Engineer : Seven

EUT : 55 inch DLED SMART TV

Power : AC 120V/60Hz M/N : E4SFT5517

Test Mode : IEEE 802.11b CH1 TX 2412MHz

ANT 1

	Freq.		Cable Loss (dB)	-	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	2390.00	27.35	3.21	0.00	4.14	34.70	74.00	39.30	Peak
2	2400.00	27.35	3.21	0.00	21.43	51.99	74.00	22.01	Peak
3	2412.45	27.39	3.23	0.00	63.30	93.92	74.00	-19.92	Peak

- 2. Margin= Limit Emission Level.
- The emission levels that are 20dB below the official limit are not reported.



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Data: 101 File: \\Emc-966-1\test data\2018\RF\z\Chunghsin Technology Group\E4SFT5517.EM6 (122) Date: 2018-01-28 110 90 FCC PART 15C PEAK 70 FCC PART 15C AV 50 30 2450 2460. 2470. 2480. 2490. 2500

Frequency (MHz)

Site no. : 1# 966 Chamber Data no. : 101
Dis. / Ant. : 3m ANT9120D 1-18G Ant. pol. : VERTICAL

Limit : FCC PART 15C PEAK

Env. / Ins. : Temp:23.5'; Humi:51%; Press:101.52kPa

Engineer : Seven

EUT : 55 inch DLED SMART TV

Power : AC 120V/60Hz M/N : E4SFT5517

Test Mode : IEEE 802.11b CH11 TX 2462MHz

ANT 1

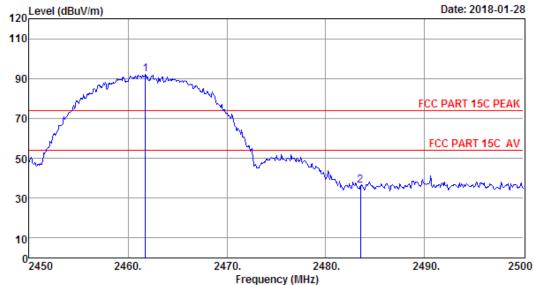
	Freq.		Factor	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1 2	2461.75 2483.50		0.00	61.27 8.71	92.06 39.56	74.00 74.00	-18.06 34.44	Peak Peak

- 2. Margin= Limit Emission Level.
- The emission levels that are 20dB below the official limit are not reported.



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Data: 102 File: \\Emc-966-1\test data\\2018\\RF\\z\\Chunghsin Technology Group\\E4SFT5517.EM6 (122)



Site no. : 1# 966 Chamber Data no. : 102
Dis. / Ant. : 3m ANT9120D 1-18G Ant. pol. : HORIZONTAL

Limit : FCC PART 15C PEAK

Env. / Ins. : Temp:23.5'; Humi:51%; Press:101.52kPa

Engineer : Seven

EUT : 55 inch DLED SMART TV

Power : AC 120V/60Hz M/N : E4SFT5517

Test Mode : IEEE 802.11b CH11 TX 2462MHz

ANT 1

Freq.	Factor	Factor	Reading	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
2461.75 2483.50			61.31 5.54	92.10 36.39	74.00 74.00	-18.10 37.61	Peak Peak

- 2. Margin= Limit Emission Level.
- The emission levels that are 20dB below the official limit are not reported.



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Data: 103 File: \\Emc-966-1\test data\2018\RF\z\Chunghsin Technology Group\E4SFT5517.EM6 (122) Date: 2018-01-28 Level (dBuV/m) 110 70 FCC PART 19 50 0²³⁰⁰ 2330. 2350. 2370. 2390. 2410. 2430 Frequency (MHz)

Site no. : 1# 966 Chamber Data no. : 103
Dis. / Ant. : 3m ANT9120D 1-18G Ant. pol. : VERTICAL

Limit : FCC PART 15C PEAK

Env. / Ins. : Temp:23.5'; Humi:51%; Press:101.52kPa

Engineer : Seven

EUT : 55 inch DLED SMART TV

Power : AC 120V/60Hz M/N : E4SFT5517

Test Mode : IEEE 802.11g CH1 TX 2412MHz

ANT 1

	Freq.		Cable Loss (dB)	-	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	2390.00	27.35	3.21	34.87	43.36	39.05	74.00	34.95	Peak
2	2400.00	27.35	3.21	34.94	54.40	50.02	74.00	23.98	Peak
3	2413.36	27.39	3.23	34.94	94.62	90.30	74.00	-16.30	Peak

- 2. Margin= Limit Emission Level.
- The emission levels that are 20dB below the official limit are not reported.



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Data: 104 File: \\Emc-966-1\test data\2018\RF\z\Chunghsin Technology Group\E4SFT5517.EM6 (122) Date: 2018-01-28 Level (dBuV/m) 110 90 70 FCC PART 150 50 0²³⁰⁰ 2330. 2350. 2370. 2390. 2410. 2430

Frequency (MHz)

Site no. : 1# 966 Chamber Data no. : 104
Dis. / Ant. : 3m ANT9120D 1-18G Ant. pol. : HORIZONTAL

Limit : FCC PART 15C PEAK

Env. / Ins. : Temp:23.5'; Humi:51%; Press:101.52kPa

Engineer : Seven

EUT : 55 inch DLED SMART TV

Power : AC 120V/60Hz M/N : E4SFT5517

Test Mode : IEEE 802.11g CH1 TX 2412MHz

ANT 1

	Freq.			-	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	2390.00	27.35	3.21	34.87	40.11	35.80	74.00	38.20	Peak
2	2400.00	27.35	3.21	34.94	50.18	45.80	74.00	28.20	Peak
3	2410.76	27.39	3.23	34.94	92.57	88.25	74.00	-14.25	Peak

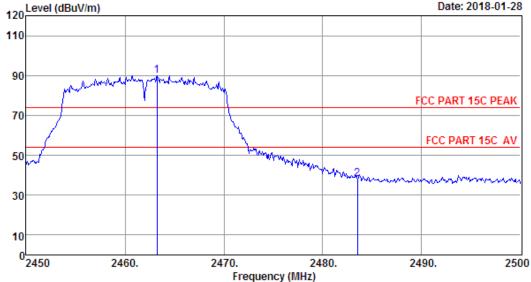
- 2. Margin= Limit Emission Level.
- The emission levels that are 20dB below the official limit are not reported.



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Data: 105 File: \\Emc-966-1\\test data\\2018\\RF\\z\\Chunghsin Technology Group\\E4SFT5517.EM6 (122)

Level (dBuV/m) Date: 2018-01-28



Site no. : 1# 966 Chamber Data no. : 105
Dis. / Ant. : 3m ANT9120D 1-18G Ant. pol. : VERTICAL

Limit : FCC PART 15C PEAK

Env. / Ins. : Temp:23.5'; Humi:51%; Press:101.52kPa

Engineer : Seven

EUT : 55 inch DLED SMART TV

Power : AC 120V/60Hz M/N : E4SFT5517

Test Mode : IEEE 802.11g CH11 TX 2462MHz

ANT 1

	Freq. (MHz)			-	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	2463.25	27.52	3.27	35.14	94.38	90.03	74.00	-16.03	Peak
2	2483.50	27.56	3.29	35.21	42.43	38.07	74.00	35.93	Peak

- 2. Margin= Limit Emission Level.
- The emission levels that are 20dB below the official limit are not reported.



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Data: 106 File: \\Emc-966-1\test data\2018\RF\z\Chunghsin Technology Group\E4SFT5517.EM6 (122) Date: 2018-01-28 Level (dBuV/m) 110 90 FCC PART 15C PEAK 70 FCC PART 15C AV 50 30 2450 2460. 2470. 2480. 2490. 2500 Frequency (MHz)

Site no. : 1# 966 Chamber Data no. : 106
Dis. / Ant. : 3m ANT9120D 1-18G Ant. pol. : HORIZONTAL

Limit : FCC PART 15C PEAK

Env. / Ins. : Temp:23.5'; Humi:51%; Press:101.52kPa

Engineer : Seven

EUT : 55 inch DLED SMART TV

Power : AC 120V/60Hz M/N : E4SFT5517

Test Mode : IEEE 802.11g CH11 TX 2462MHz

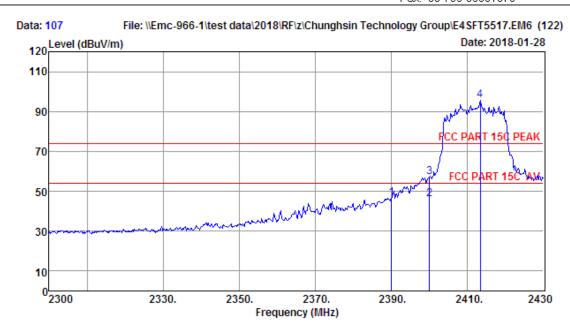
ANT 2

	Freq. (MHz)			-	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	2463.25	27.52	3.27	35.14	96.44	92.09	74.00	-18.09	Peak
2	2483.50	27.56	3.29	35.21	43.48	39.12	74.00	34.88	Peak

- 2. Margin= Limit Emission Level.
- The emission levels that are 20dB below the official limit are not reported.



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Site no. : 1# 966 Chamber Data no. : 107
Dis. / Ant. : 3m ANT9120D 1-18G Ant. pol. : VERTICAL

Limit : FCC PART 15C PEAK

Env. / Ins. : Temp:23.5'; Humi:51%; Press:101.52kPa

Engineer : Seven

EUT : 55 inch DLED SMART TV

Power : AC 120V/60Hz M/N : E4SFT5517

Test Mode : IEEE 802.11n HT20 CH1 TX 2412MHz

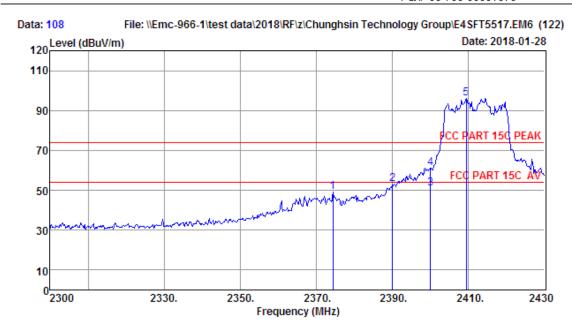
ANT 1+2

	Freq.	Ant. Factor (dB/m)		Amp Factor (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	2390.00	27.35	3.21	34.87	50.59	46.28	74.00	27.72	Peak
2	2400.00	27.35	3.21	34.94	50.55	46.17	54.00	7.83	Average
3	2400.00	27.35	3.21	34.94	61.55	57.17	74.00	16.83	Peak
4	2413.36	27.39	3.23	34.94	99.87	95.55	74.00	-21.55	Peak

- 2. Margin= Limit Emission Level.
- The emission levels that are 20dB below the official limit are not reported.



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Site no. : 1# 966 Chamber Data no. : 108
Dis. / Ant. : 3m ANT9120D 1-18G Ant. pol. : HORIZONTAL

Limit : FCC PART 15C PEAK

Env. / Ins. : Temp:23.5'; Humi:51%; Press:101.52kPa

Engineer : Seven

EUT : 55 inch DLED SMART TV

Power : AC 120V/60Hz M/N : E4SFT5517

Test Mode : IEEE 802.11n HT20 CH1 TX 2412MHz

ANT 1+2

	Freq.	Ant. Factor (dB/m)	Cable Loss (dB)	Amp Factor (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	2374.36	27.31	3.20	34.80	53.61	49.32	74.00	24.68	Peak
2	2390.00	27.35	3.21	34.87	57.45	53.14	74.00	20.86	Peak
3	2400.00	27.35	3.21	34.94	55.32	50.94	54.00	3.06	Average
4	2400.00	27.35	3.21	34.94	65.32	60.94	74.00	13.06	Peak
5	2409.46	27.39	3.23	34.94	100.60	96.28	74.00	-22.28	Peak

- 2. Margin= Limit Emission Level.
- The emission levels that are 20dB below the official limit are not reported.



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File: \\Emc-966-1\test data\2018\RF\z\Chunghsin Technology Group\E4SFT5517.EM6 (122) Date: 2018-01-28 Level (dBuV/m) 110 90 FCC PART 15C PEAK 70 FCC PART 15C AV away. 50 30 2450 2460. 2470. 2480. 2490. 2500

Frequency (MHz)

Site no. : 1# 966 Chamber Data no. : 109
Dis. / Ant. : 3m ANT9120D 1-18G Ant. pol. : HORIZONTAL

Limit : FCC PART 15C PEAK

Env. / Ins. : Temp:23.5'; Humi:51%; Press:101.52kPa

Engineer : Seven

EUT : 55 inch DLED SMART TV

Power : AC 120V/60Hz M/N : E4SFT5517

Test Mode : IEEE 802.11n HT20 CH11 TX 2462MHz

ANT 1+2

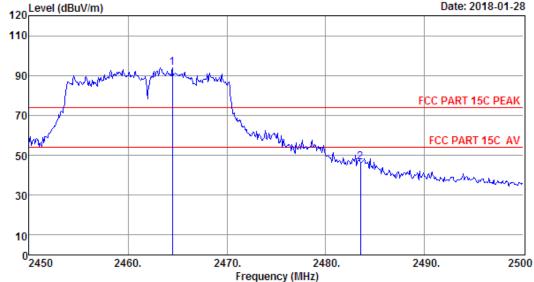
	Freq.		Factor	Reading	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1 2	2464.50 2483.50				95.78 48.48	74.00 74.00	-21.78 25.52	Peak Peak

- 2. Margin= Limit Emission Level.
- The emission levels that are 20dB below the official limit are not reported.



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Data: 110 File: \\Emc-966-1\test data\\2018\\RF\z\\Chunghsin Technology Group\\E4SFT5517.EM6 (122)
\text{Level (dBuV/m)} Date: 2018-01-28



Site no. : 1# 966 Chamber Data no. : 110
Dis. / Ant. : 3m ANT9120D 1-18G Ant. pol. : VERTICAL

Limit : FCC PART 15C PEAK

Env. / Ins. : Temp:23.5'; Humi:51%; Press:101.52kPa

Engineer : Seven

EUT : 55 inch DLED SMART TV

Power : AC 120V/60Hz M/N : E4SFT5517

Test Mode : IEEE 802.11n HT20 CH11 TX 2462MHz

ANT 1+2

	Freq.		Factor	Reading (dBuV)		Limits (dBuV/m)	Margin (dB)	Remark
1 2	2464.50 2483.50			98.42 50.68	94.07 46.32		-20.07 27.68	Peak Peak

- 2. Margin= Limit Emission Level.
- The emission levels that are 20dB below the official limit are not reported.



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Data: 111 File: \\Emc-966-1\test data\2018\RF\z\Chunghsin Technology Group\E4SFT5517.EM6 (122) Date: 2018-01-28 110 70 my whom how has FCC PART 50 0²³⁰⁰ 2330. 2350. 2370. 2390. 2410. 2430 Frequency (MHz)

Site no. : 1# 966 Chamber Data no. : 111
Dis. / Ant. : 3m ANT9120D 1-18G Ant. pol. : HORIZONTAL

Limit : FCC PART 15C PEAK

Env. / Ins. : Temp:23.5'; Humi:51%; Press:101.52kPa

Engineer : Seven

EUT : 55 inch DLED SMART TV

Power : AC 120V/60Hz M/N : E4SFT5517

Test Mode : IEEE 802.11n HT40 CH3 TX 2422MHz

ANT 1+2

	Freq.	Ant. Factor (dB/m)	Cable Loss (dB)	Amp Factor (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	2385.80	27.35	3.21	34.87	54.29	49.98	54.00	4.02	Average
2	2385.80	27.35	3.21	34.87	63.29	58.98	74.00	15.02	Peak
3	2390.00	27.35	3.21	34.87	51.80	47.49	54.00	6.51	Average
4	2390.00	27.35	3.21	34.87	60.80	56.49	74.00	17.51	Peak
5	2400.00	27.35	3.21	34.94	53.94	49.56	54.00	4.44	Average
6	2400.00	27.35	3.21	34.94	63.94	59.56	74.00	14.44	Peak
7	2419.60	27.43	3.24	35.00	99.97	95.64	74.00	-21.64	Peak

Report No. ESTE-R1801079

- 2. Margin= Limit Emission Level.
- The emission levels that are 20dB below the official limit are not reported.



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Data: 112 File: \\Emc-966-1\test data\2018\RF\z\Chunghsin Technology Group\E4SFT5517.EM6 (122) Date: 2018-01-28 Level (dBuV/m) 110 70 FCC PART 15C 50 0²³⁰⁰ 2330. 2350. 2370. 2390. 2410. 2430

Frequency (MHz)

Site no. : 1# 966 Chamber Data no. : 112
Dis. / Ant. : 3m ANT9120D 1-18G Ant. pol. : VERTICAL

Limit : FCC PART 15C PEAK

Env. / Ins. : Temp:23.5'; Humi:51%; Press:101.52kPa

Engineer : Seven

EUT : 55 inch DLED SMART TV

Power : AC 120V/60Hz M/N : E4SFT5517

Test Mode : IEEE 802.11n HT40 CH3 TX 2422MHz

ANT 1+2

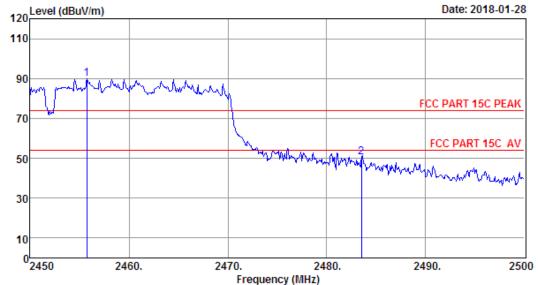
	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	-	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	2384.50	27.31	3.20	34.87	56.97	52.61	74.00	21.39	Peak
2	2390.00	27.35	3.21	34.87	52.56	48.25	74.00	25.75	Peak
3	2400.00	27.35	3.21	34.94	57.10	52.72	74.00	21.28	Peak
4	2428.44	27.43	3.24	35.00	95.57	91.24	74.00	-17.24	Peak

- 2. Margin= Limit Emission Level.
- The emission levels that are 20dB below the official limit are not reported.



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Data: 113 File: \\Emc-966-1\test data\\2018\\RF\z\\Chunghsin Technology Group\\E4SFT5517.EM6 (122)



Site no. : 1# 966 Chamber Data no. : 113
Dis. / Ant. : 3m ANT9120D 1-18G Ant. pol. : VERTICAL

Limit : FCC PART 15C PEAK

Env. / Ins. : Temp:23.5'; Humi:51%; Press:101.52kPa

Engineer : Seven

EUT : 55 inch DLED SMART TV

Power : AC 120V/60Hz M/N : E4SFT5517

Test Mode : IEEE 802.11n HT40 CH9 TX 2452MHz

ANT 1+2

	Freq.		Factor	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1 2	2455.75 2483.50			94.08 54.94	89.73 50.58	74.00 74.00	-15.73 23.42	Peak Peak

- 2. Margin= Limit Emission Level.
- The emission levels that are 20dB below the official limit are not reported.



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Data: 114

File: \|Emc-966-1\|test data\|2018\|RF\|z\|Chunghsin Technology Group\|E4SFT5517.EM6 (122)

Date: 2018-01-28

FCC PART 15C PEAK

6 FCC PART 15C AV

50

10

2450

2460.

2470.

2480.

2490.

2500

Frequency (MHz)

Site no. : 1# 966 Chamber Data no. : 114
Dis. / Ant. : 3m ANT9120D 1-18G Ant. pol. : HORIZONTAL

Limit : FCC PART 15C PEAK

Env. / Ins. : Temp:23.5'; Humi:51%; Press:101.52kPa

Engineer : Seven

EUT : 55 inch DLED SMART TV

Power : AC 120V/60Hz M/N : E4SFT5517

Test Mode : IEEE 802.11n HT40 CH9 TX 2452MHz

ANT 1+2

	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	27.52	3.27	35.14	98.17	93.82	74.00	-19.82	Peak
2	2483.50	27.56	3.29	35.21	56.84	52.48	74.00	21.52	Peak
3	2484.50	27.56	3.29	35.21	49.44	45.08	54.00	8.92	Average
4	2484.50	27.56	3.29	35.21	60.44	56.08	74.00	17.92	Peak
5	2489.50	27.60	3.30	35.27	48.35	43.98	54.00	10.02	Average
6	2489.50	27.60	3.30	35.27	59.35	54.98	74.00	19.02	Peak

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

- 2. Margin= Limit Emission Level.
- The emission levels that are 20dB below the official limit are not reported.



Report No. ESTE-R1801079

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Data: 115 File: \\Emc-966-1\test data\2018\RF\z\Chunghsin Technology Group\E4SFT5517.EM6 (122) Date: 2018-01-28 Level (dBuV/m) 110 90 70 FCC 50 0²³⁰⁰

2370.

Frequency (MHz)

2390.

2410.

2430

Site no. : 1# 966 Chamber Data no. : 115 Ant. pol. : VERTICAL Dis. / Ant. : 3m ANT9120D 1-18G

2350.

: FCC PART 15C PEAK

Env. / Ins. : Temp:23.5';Humi:51%;Press:101.52kPa

2330.

Engineer : Seven

: 55 inch DLED SMART TV EUT

: AC 120V/60Hz Power M/N : E4SFT5517

Test Mode : IEEE 802.11b CH1 TX 2412MHz

ANT 2

	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	-	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	2390.00	27.35	3.21	34.87	38.80	34.49	74.00	39.51	Peak
2	2400.00	27.35	3.21	34.94	50.41	46.03	54.00	7.97	Average
3	2400.00	27.35	3.21	34.94	60.41	56.03	74.00	17.97	Peak
4	2411.80	27.39	3.23	34.94	96.12	91.80	74.00	-17.80	Peak

- 2. Margin= Limit Emission Level.
- 3. The emission levels that are 20dB below the official limit are not reported.



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Data: 116 File: \\Emc-966-1\test data\2018\RF\z\Chunghsin Technology Group\E4SFT5517.EM6 (122) Date: 2018-01-28 Level (dBuV/m) 110 90 70 FCC 50 0²³⁰⁰ 2330. 2350. 2370. 2390. 2410. 2430 Frequency (MHz)

Site no. : 1# 966 Chamber Data no. : 116
Dis. / Ant. : 3m ANT9120D 1-18G Ant. pol. : HORIZONTAL

Limit : FCC PART 15C PEAK

Env. / Ins. : Temp:23.5'; Humi:51%; Press:101.52kPa

Engineer : Seven

EUT : 55 inch DLED SMART TV

Power : AC 120V/60Hz M/N : E4SFT5517

Test Mode : IEEE 802.11b CH1 TX 2412MHz

ANT 2

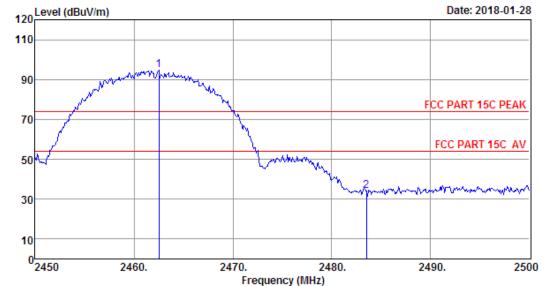
	Freq.		Cable Loss (dB)	-	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	2390.00	27.35	3.21	34.87	43.13	38.82	74.00	35.18	Peak
2	2400.00	27.35	3.21	34.94	54.34	49.96	54.00	4.04	Average
3	2400.00	27.35	3.21	34.94	64.34	59.96	74.00	14.04	Peak
4	2411.80	27.39	3.23	34.94	101.58	97.26	74.00	-23.26	Peak

- 2. Margin= Limit Emission Level.
- The emission levels that are 20dB below the official limit are not reported.



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Data: 117 File: \\Emc-966-1\\test data\\2018\\RF\z\\Chunghsin Technology Group\\E4SFT5517.EM6 (122)



Site no. : 1# 966 Chamber Data no. : 117
Dis. / Ant. : 3m ANT9120D 1-18G Ant. pol. : HORIZONTAL

Limit : FCC PART 15C PEAK

Env. / Ins. : Temp:23.5'; Humi:51%; Press:101.52kPa

Engineer : Seven

EUT : 55 inch DLED SMART TV

Power : AC 120V/60Hz M/N : E4SFT5517

Test Mode : IEEE 802.11b CH11 TX 2462MHz

ANT 2

	Freq.			Factor	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	2462.50				98.92	94.57	74.00	-20.57	Peak
2	2483.50	27.56	3.29	35.21	38.24	33.88	74.00	40.12	Peak

- 2. Margin= Limit Emission Level.
- The emission levels that are 20dB below the official limit are not reported.



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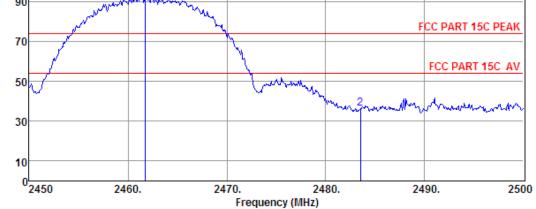
Data: 118 File: \\Emc-966-1\test data\\2018\\RF\z\\Chunghsin Technology Group\\E4SFT5517.EM6 (122)

120 Level (dBuV/m)

Date: 2018-01-28

110

90



Site no. : 1# 966 Chamber Data no. : 118
Dis. / Ant. : 3m ANT9120D 1-18G Ant. pol. : VERTICAL

Limit : FCC PART 15C PEAK

Env. / Ins. : Temp:23.5'; Humi:51%; Press:101.52kPa

Engineer : Seven

EUT : 55 inch DLED SMART TV

Power : AC 120V/60Hz M/N : E4SFT5517

Test Mode : IEEE 802.11b CH11 TX 2462MHz

ANT 2

	Freq.			-	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	2461.75					92.98	74.00	-18.98	Peak
2	2483.50	27.56	3.29	35.21	40.60	36.24	74.00	37.76	Peak

- 2. Margin= Limit Emission Level.
- The emission levels that are 20dB below the official limit are not reported.



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Data: 119 File: \\Emc-966-1\test data\2018\RF\z\Chunghsin Technology Group\E4SFT5517.EM6 (122) Date: 2018-01-28 Level (dBuV/m) 110 70 FCC PART 150 50 0²³⁰⁰ 2330. 2350. 2370. 2390. 2410. 2430 Frequency (MHz)

Site no. : 1# 966 Chamber Data no. : 119
Dis. / Ant. : 3m ANT9120D 1-18G Ant. pol. : HORIZONTAL

Limit : FCC PART 15C PEAK

Env. / Ins. : Temp:23.5'; Humi:51%; Press:101.52kPa

Engineer : Seven

EUT : 55 inch DLED SMART TV

Power : AC 120V/60Hz M/N : E4SFT5517

Test Mode : IEEE 802.11g CH1 TX 2412MHz

ANT 2

	Freq.	Ant. Factor (dB/m)	Cable Loss (dB)	-	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	2390.00	27.35	3.21	34.87	52.48	48.17	74.00	25.83	Peak
2	2400.00	27.35	3.21	34.94	54.67	50.29	54.00	3.71	Average
3	2400.00	27.35	3.21	34.94	64.67	60.29	74.00	13.71	Peak
4	2413.36	27.39	3.23	34.94	97.74	93.42	74.00	-19.42	Peak

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- 2. Margin= Limit Emission Level.
- The emission levels that are 20dB below the official limit are not reported.



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Data: 120 File: \\Emc-966-1\test data\2018\RF\z\Chunghsin Technology Group\E4SFT5517.EM6 (122) Date: 2018-01-28 Level (dBuV/m) 110 70 FCC PART 150 A 50 0²³⁰⁰ 2330. 2350. 2370. 2390. 2410. 2430 Frequency (MHz)

Site no. : 1# 966 Chamber Data no. : 120
Dis. / Ant. : 3m ANT9120D 1-18G Ant. pol. : VERTICAL

Limit : FCC PART 15C PEAK

Env. / Ins. : Temp:23.5'; Humi:51%; Press:101.52kPa

Engineer : Seven

EUT : 55 inch DLED SMART TV

Power : AC 120V/60Hz M/N : E4SFT5517

Test Mode : IEEE 802.11g CH1 TX 2412MHz

ANT 2

	Freq.	Ant. Factor (dB/m)		Amp Factor (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	2390.00	27.35	3.21	34.87	50.36	46.05	74.00	27.95	Peak
2	2400.00	27.35	3.21	34.94	49.24	44.86	54.00	9.14	Average
3	2400.00	27.35	3.21	34.94	58.24	53.86	74.00	20.14	Peak
4	2413.36	27.39	3.23	34.94	96.01	91.69	74.00	-17.69	Peak

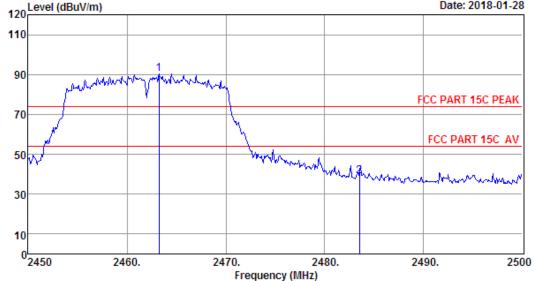
- 2. Margin= Limit Emission Level.
- The emission levels that are 20dB below the official limit are not reported.



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Data: 121 File: \\Emc-966-1\\test data\\2018\\RF\z\\Chunghsin Technology Group\\E4SFT5517.EM6 (122)

120 Level (dBuV/m) Date: 2018-01-28



Site no. : 1# 966 Chamber Data no. : 121
Dis. / Ant. : 3m ANT9120D 1-18G Ant. pol. : VERTICAL

Limit : FCC PART 15C PEAK

Env. / Ins. : Temp:23.5'; Humi:51%; Press:101.52kPa

Engineer : Seven

EUT : 55 inch DLED SMART TV

Power : AC 120V/60Hz M/N : E4SFT5517

Test Mode : IEEE 802.11g CH11 TX 2462MHz

ANT 2

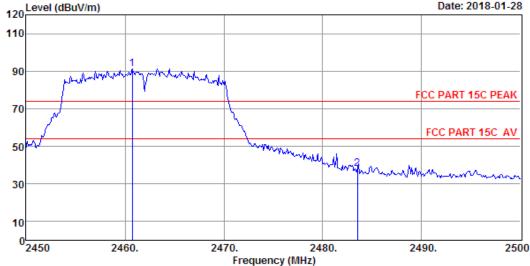
	Freq.		-	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	2463.25 2483.50	 		94.60 43.32	90.25 38.96	74.00 74.00	-16.25 35.04	Peak Peak

- 2. Margin= Limit Emission Level.
- The emission levels that are 20dB below the official limit are not reported.



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File: \\Emc-966-1\test data\2018\RF\z\Chunghsin Technology Group\E4SFT5517.EM6 (122) Data: 122 120 Level (dBuV/m) Date: 2018-01-28



: 1# 966 Chamber Data no. : 122 Site no. Dis. / Ant. : 3m ANT9120D 1-18G Ant. pol. : HORIZONTAL

: FCC PART 15C PEAK Limit

Env. / Ins. : Temp:23.5';Humi:51%;Press:101.52kPa

Engineer : Seven

: 55 inch DLED SMART TV : AC 120V/60Hz EUT

Power : E4SFT5517

: IEEE 802.11g CH11 TX 2462MHz Test Mode

ANT 2

	Freq.	Factor	Factor	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1 2	2460.75 2483.50		 		91.36 37.94	74.00 74.00	-17.36 36.06	Peak Peak

- 2. Margin= Limit Emission Level.
- 3. The emission levels that are 20dB below the official limit are not reported.



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 for 6dB

- 1, The transmitter output (antenna port) was connected to the spectrum analyzer. Connect EUT antenna terminal to the spectrum analyzer with a low loss SMA cable.
- 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 Procedure for 20dB

- 1, The transmitter output (antenna port) was connected to the spectrum analyzer. Connect EUT antenna terminal to the spectrum analyzer with a low loss SMA cable.
- 2, Follow the test procedure as described in C63.10
 - (1). The spectrum analyzer center frequency is set to the nominal EUT channel center frequency. The span range for the EMI receiver or spectrum analyzer shall be between two times and five times the OBW
 - (2). The nominal IF filter bandwidth (3 dB RBW) shall be in the range of 1% to 5% of the OBW andvideo bandwidth (VBW) shall be approximately three times RBW, unless otherwise specified by the applicable requirement.
 - (3). Set the reference level of the instrument as required, keeping the signal from exceeding the maximum input mixer level for linear operation. In general, the peak of the spectral envelope shall be more than [10 log (OBW/RBW)] below the reference level. Specific guidance is given in 4.1.5.2.
 - (4). Steps a) through c) might require iteration to adjust within the specified tolerances.
 - (5). The dynamic range of the instrument at the selected RBW shall be more than 10 dB below the target "-xx dB down" requirement; that is, if the requirement calls for measuring the -20 dB OBW, the instrument noise floor at the selected RBW shall be at least 30 dB below the reference value.
 - (6). Set detection mode to peak and trace mode to max hold.
 - (7). Determine the reference value: Set the EUT to transmit an unmodulated carrier or modulated signal, as applicable. Allow the trace to stabilize. Set the spectrum analyzer marker to the highest level of the displayed trace (this is the reference value).
 - (8). Determine the "-xx dB down amplitude" using [(reference value) -xx]. Alternatively, this calculation may be made by using the marker-delta function of the instrument.
 - (9). If the reference value is determined by an unmodulated carrier, then turn the EUT modulation ON, and either clear the existing trace or start a new trace on the spectrum analyzer and allow the new trace to stabilize. Otherwise, the trace from step g) shall be used for step j).
 - (10). Place two markers, one at the lowest frequency and the other at the highest frequency of the envelope of the spectral display, such that each marker is at or slightly below the "_xx dB down amplitude" determined in step h). If a marker is below this "-xx dB down amplitude" value,

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then it shall be as close as possible to this value. The occupied bandwidth is the frequency difference between the two markers. Alternatively, set a marker at the lowest frequency of the envelope of the spectral display, such that the marker is at or slightly below the "_xx dB down amplitude" determined in step h). Reset the marker-delta function and move the marker to the other side of the emission until the delta marker amplitude is at the same level as the reference marker amplitude. The marker-delta frequency reading at this point is the specified emission bandwidth.

(11). The occupied bandwidth shall be reported by providing plot(s) of the measuring instrument display; the plot axes and the scale units per division shall be clearly labeled. Tabular data may be reported in addition to the plot(s).



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6.4 Test Result

EUT: 55 inch DLED	SMART TV					
M/N: E4SFT5517						
Test date: 2018.01.24		Test site: RF Site		Tested by	: Seven	
		6dB bandwidth 20dB bandwidth			Limit	
Test Mode	СН	(MHz)	(MHz)	6dB BW (KHz)	20dB BW	
		Antenna 0		/ /		
	CH1	9.480	16.383	>500	/	
IEEE 802.11 b	СН6	9.513	16.120	>500	/	
	CH11	9.539	16.301	>500	/	
	CH1	15.841	18.190	>500	/	
IEEE 802.11 g	СН6	15.131	18.138	>500	/	
	CH11	15.579	18.180	>500	/	
TEEE 002 11	CH1	15.137	18.157	>500	/	
IEEE 802.11 n HT 20	СН6	15.169	18.496	>500	/	
H1 20	CH11	15.148	18.252	>500	/	
IEEE 002 11	CH3	35.101	39.665	>500	/	
IEEE 802.11 n - HT 40 -	СН6	35.062	39.189	>500	/	
111 40	CH9	35.108	39.198	>500	/	
		Anetnna 1				
	CH1	9.865	16.242	>500	/	
IEEE 802.11 b	CH6	8.203	16.583	>500	/	
	CH11	9.214	16.314	>500	/	
	CH1	15.160	18.177	>500	/	
IEEE 802.11 g	CH6	15.144	18.254	>500	/	
	CH11	15.381	18.427	>500	/	
IEEE 002 11	CH1	15.740	18.123	>500	/	
IEEE 802.11 n HT 20	СН6	15.169	18.388	>500	/	
111 20	CH11	15.113	18.567	>500	/	
IEEE 902 11	СНЗ	35.127	39.813	>500	/	
IEEE 802.11 n HT 40	СН6	35.098	39.234	>500	/	
111 40	СН9	35.111	39.264	>500	/	
Conclusion: PASS						

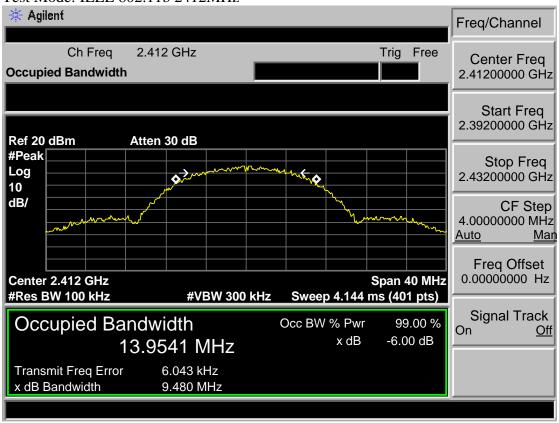


Report No.ESTE-R1801079

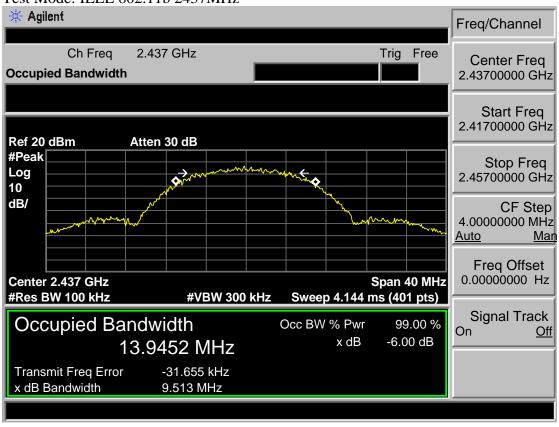
6.5 6dB Test Data

Antenna 0

Test Mode: IEEE 802.11b 2412MHz

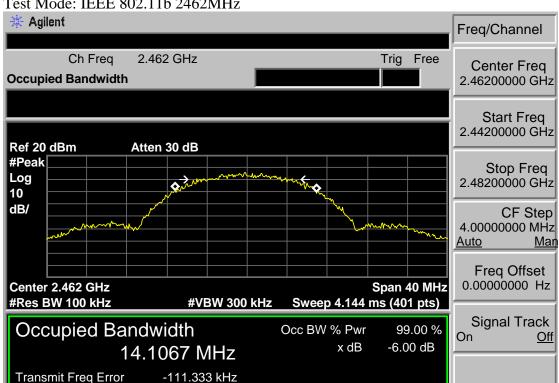


Test Mode: IEEE 802.11b 2437MHz





x dB Bandwidth

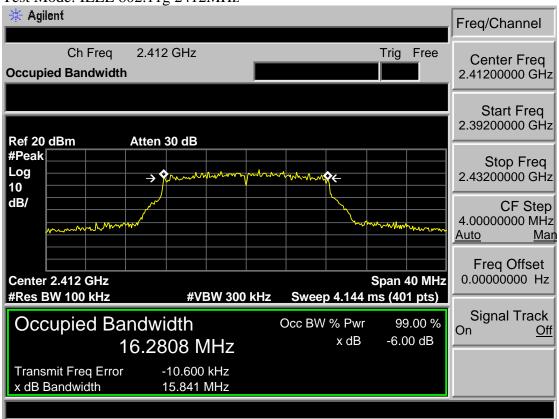


9.539 MHz

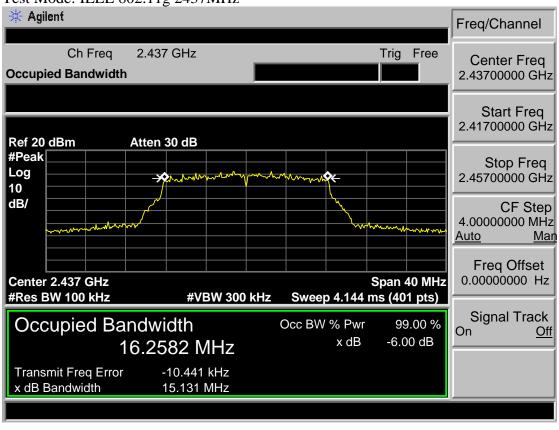


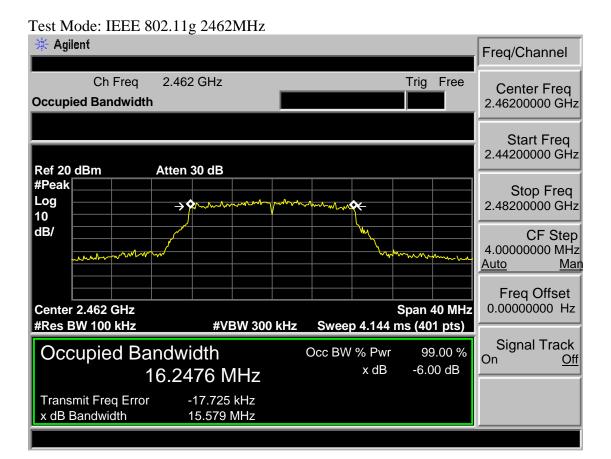


Test Mode: IEEE 802.11g 2412MHz

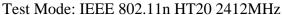


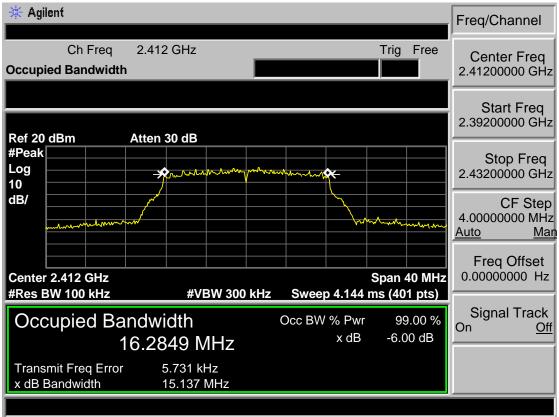
Test Mode: IEEE 802.11g 2437MHz



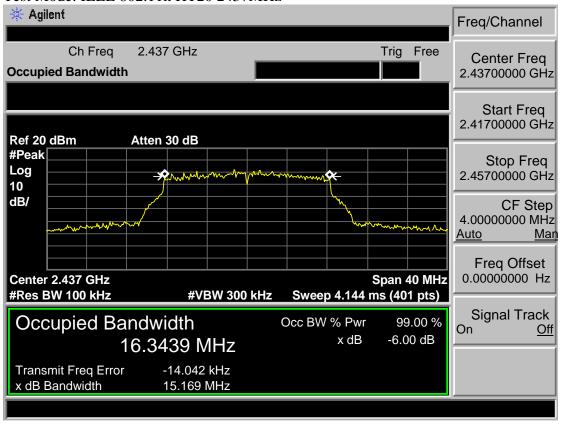






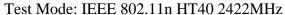


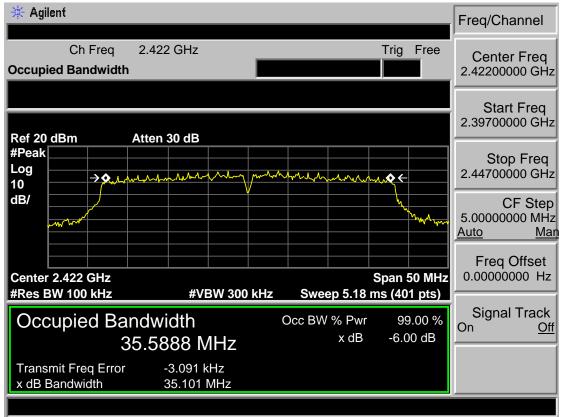
Test Mode: IEEE 802.11n HT20 2437MHz



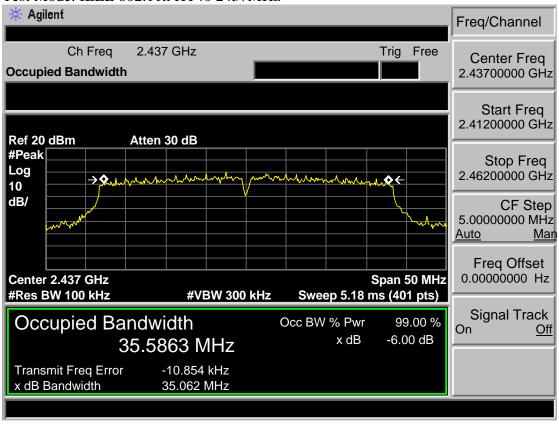
Test Mode: IEEE 802.11n HT20 2462MHz Agilent Freq/Channel Ch Freq 2.462 GHz Trig Free Center Freq **Occupied Bandwidth** 2.46200000 GHz Start Freq 2.44200000 GHz Ref 20 dBm Atten 30 dB #Peak Stop Freq 2.48200000 GHz Log 10 dB/ CF Step 4.00000000 MHz <u>Auto</u> Man Freq Offset 0.00000000 Hz Center 2.462 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 16.2936 MHz Transmit Freq Error -34.691 kHz x dB Bandwidth 15.148 MHz



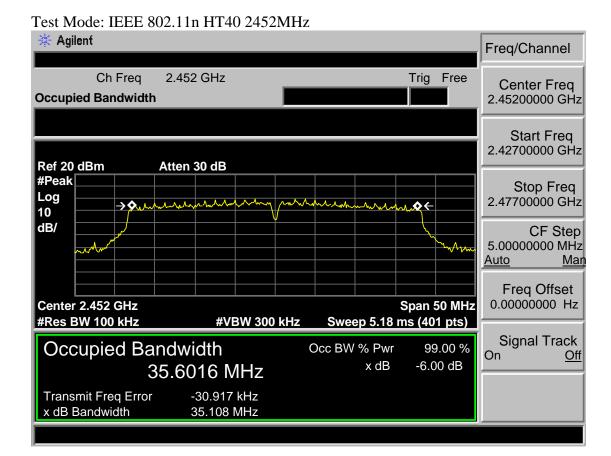




Test Mode: IEEE 802.11n HT40 2437MHz



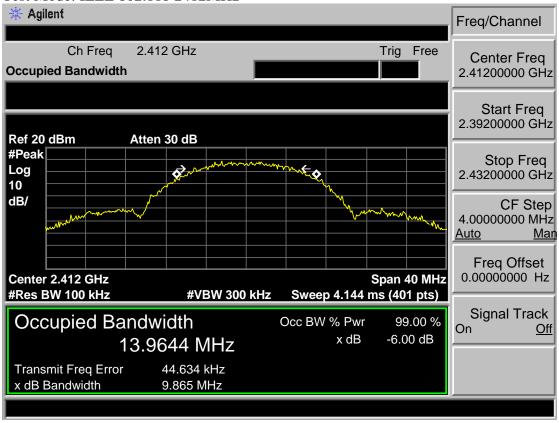




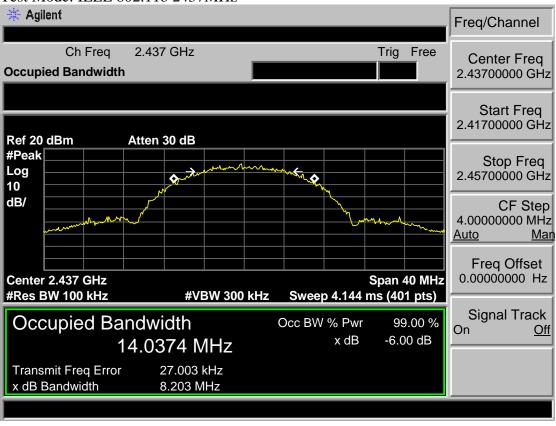


Antenna 1

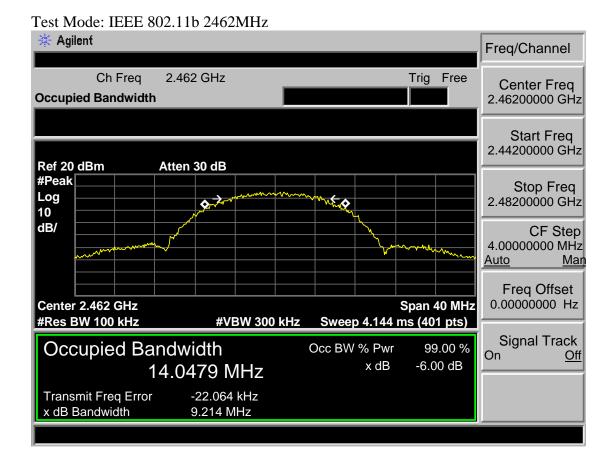
Test Mode: IEEE 802.11b 2412MHz



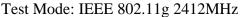
Test Mode: IEEE 802.11b 2437MHz

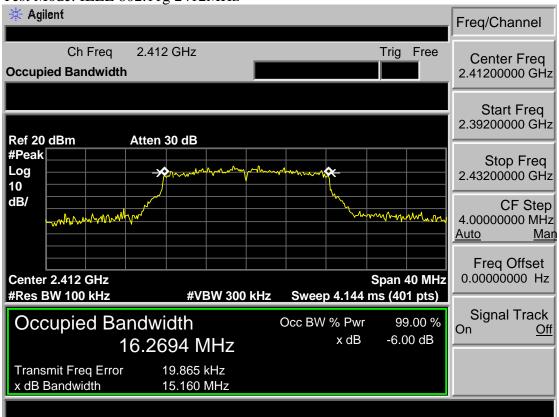




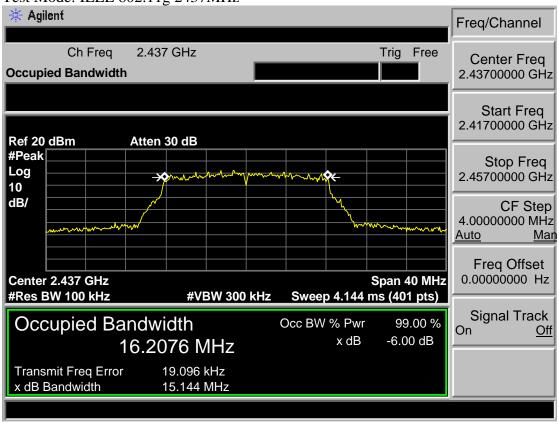


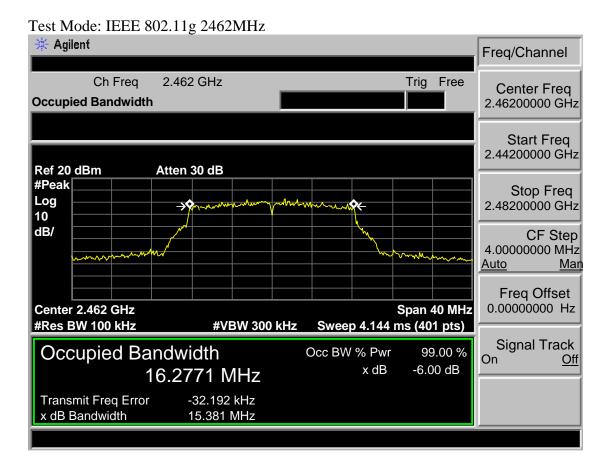




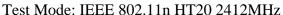


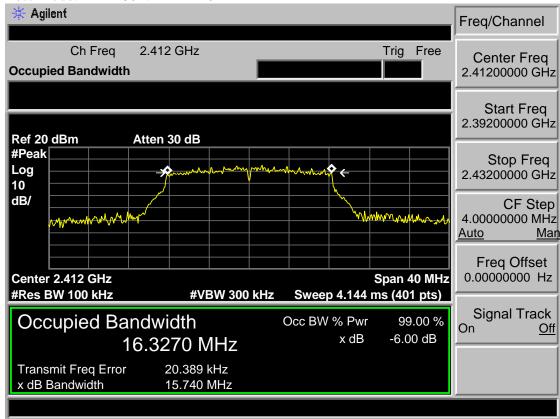
Test Mode: IEEE 802.11g 2437MHz



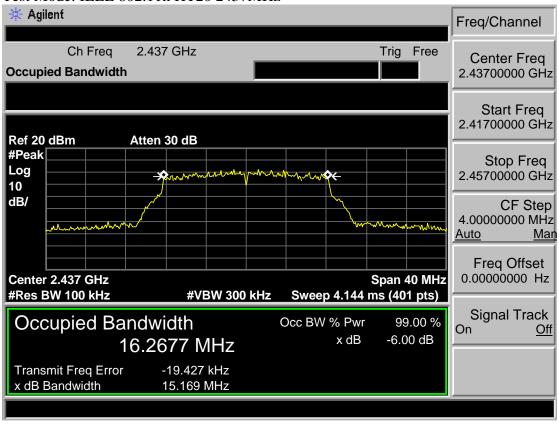


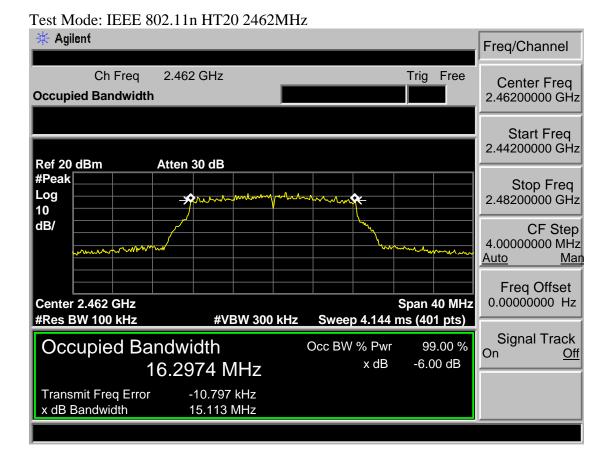






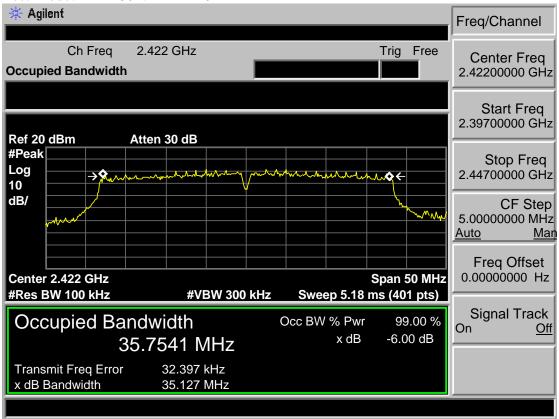
Test Mode: IEEE 802.11n HT20 2437MHz



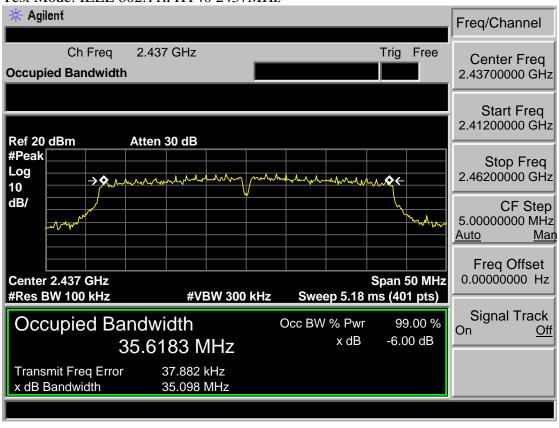


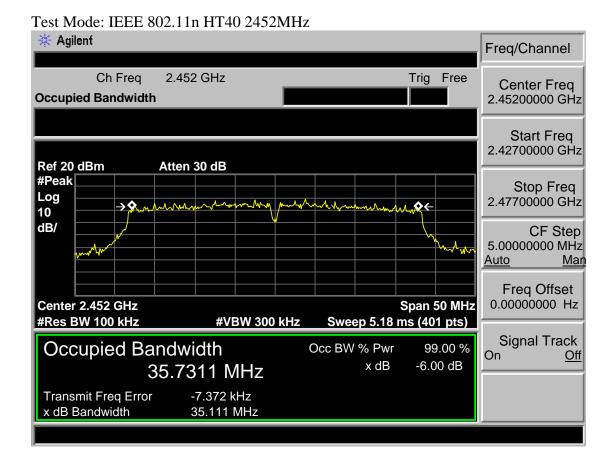






Test Mode: IEEE 802.11n HT40 2437MHz

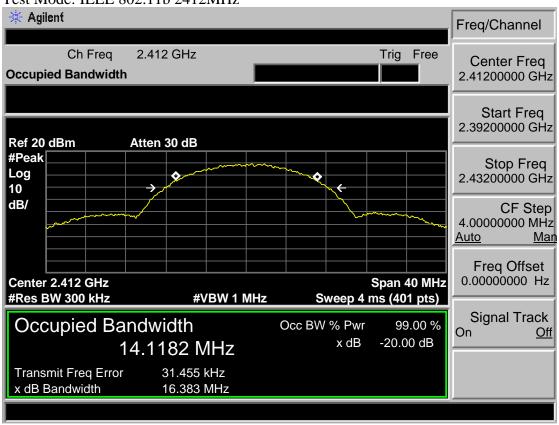




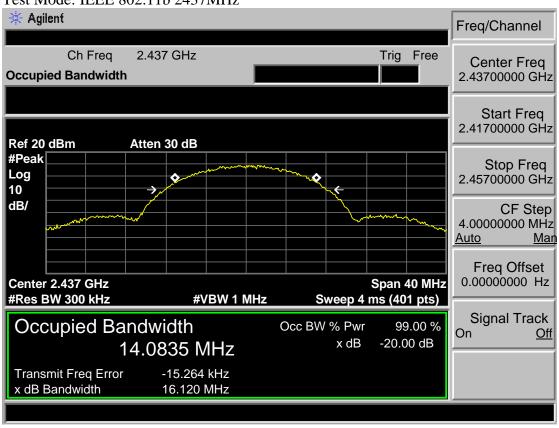
6.6 20dB Test Data

Antenna 0

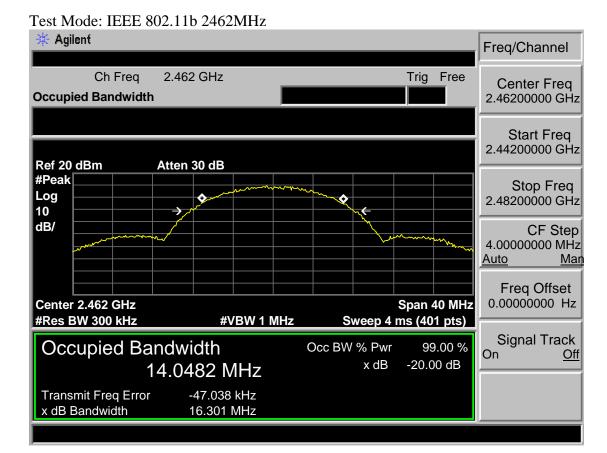
Test Mode: IEEE 802.11b 2412MHz



Test Mode: IEEE 802.11b 2437MHz

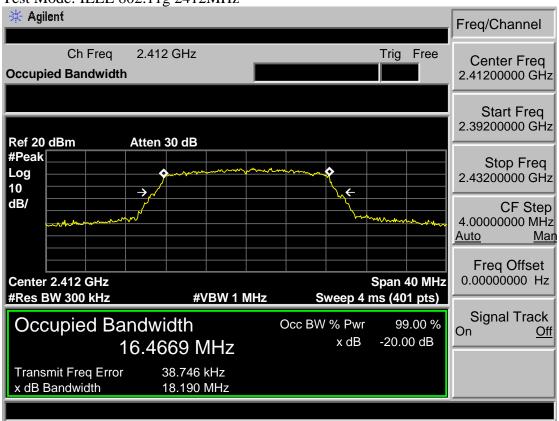




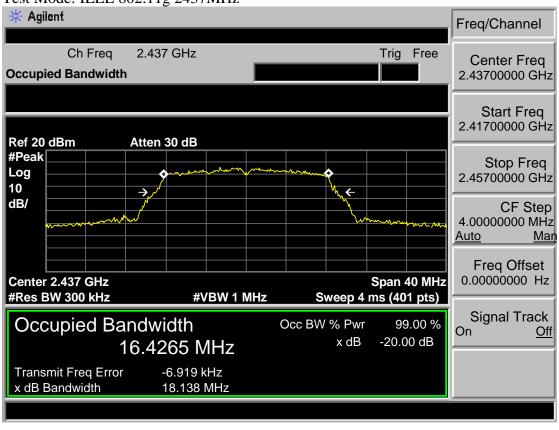


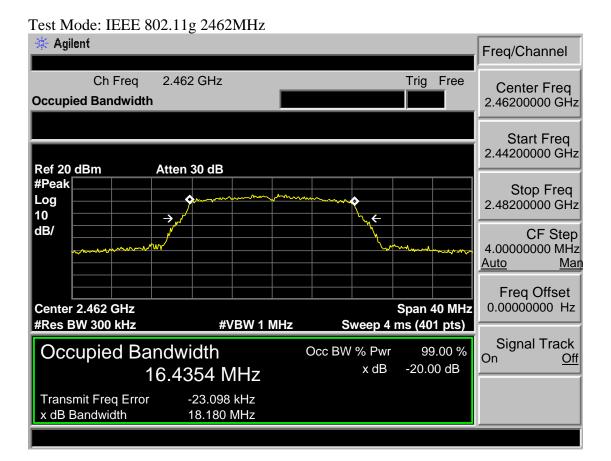


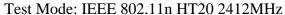
Test Mode: IEEE 802.11g 2412MHz

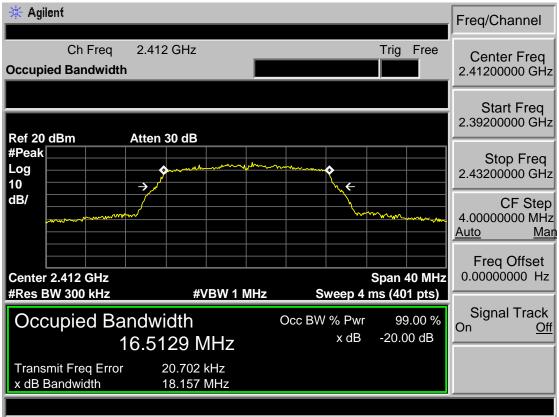


Test Mode: IEEE 802.11g 2437MHz

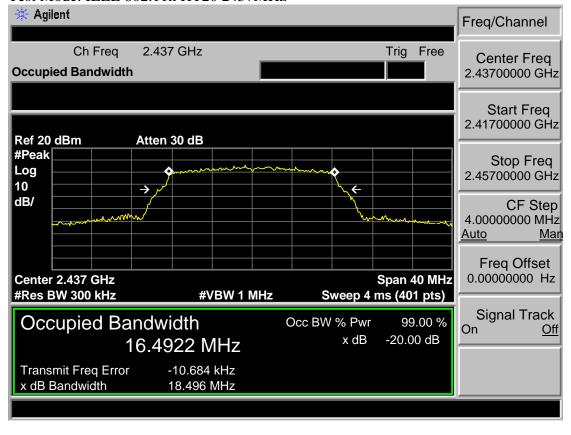




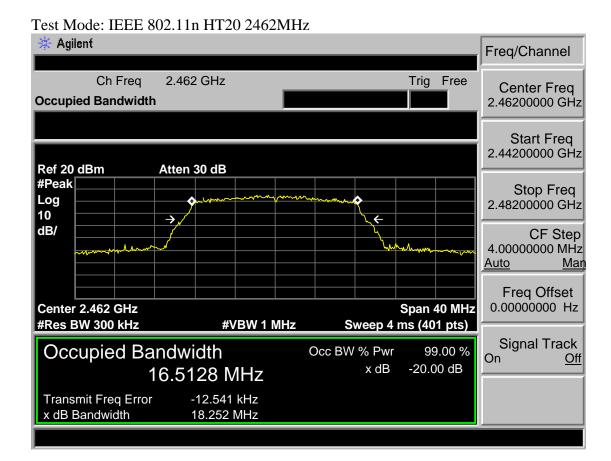




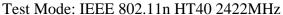
Test Mode: IEEE 802.11n HT20 2437MHz

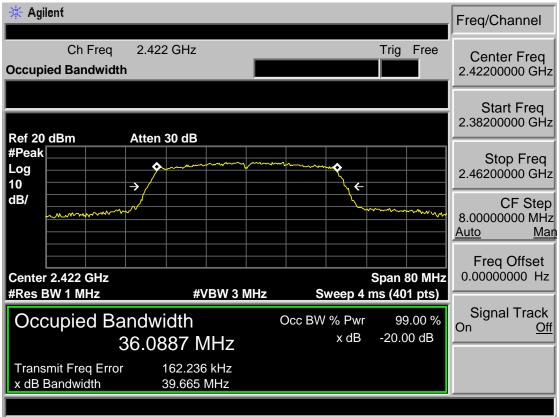




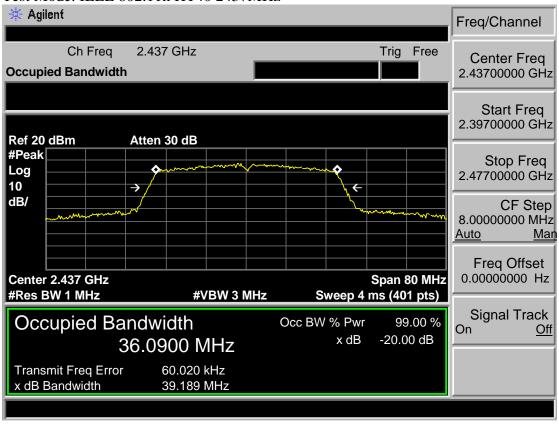


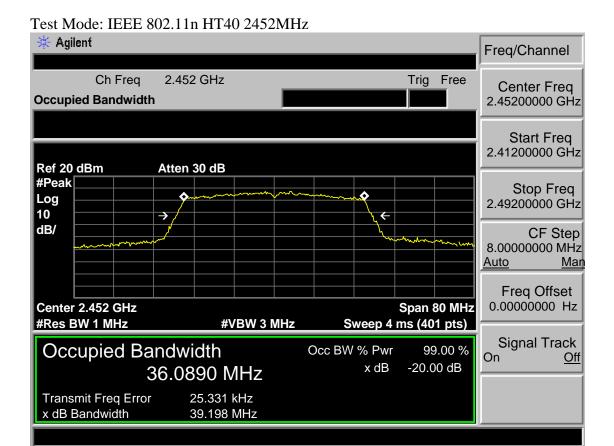






Test Mode: IEEE 802.11n HT40 2437MHz

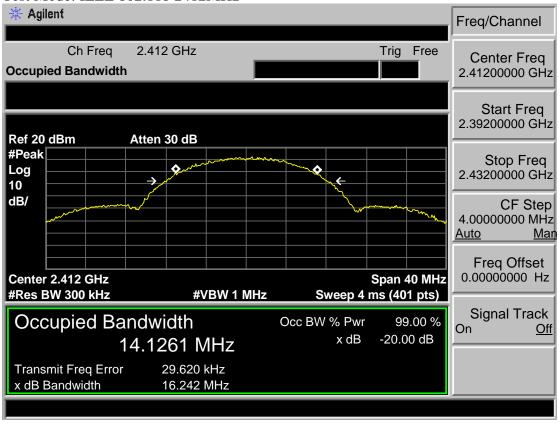




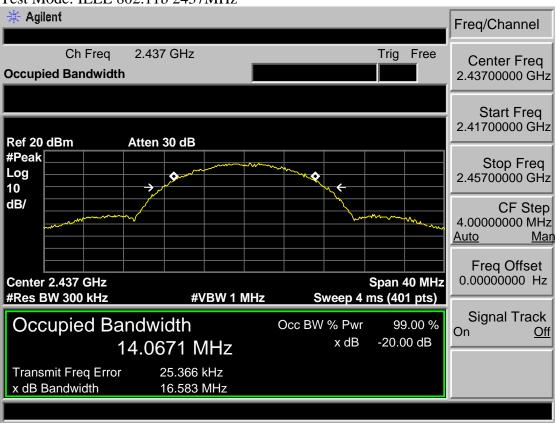


Antenna 1

Test Mode: IEEE 802.11b 2412MHz



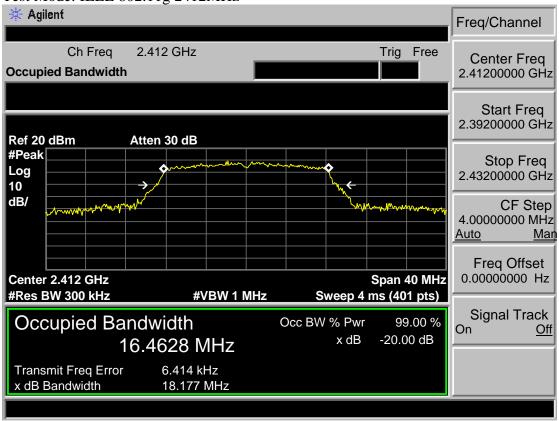
Test Mode: IEEE 802.11b 2437MHz



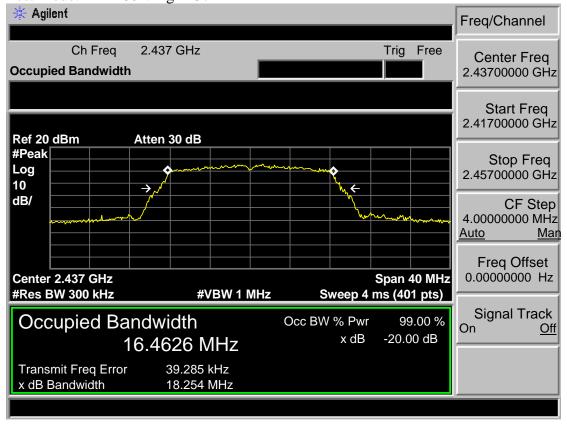
Test Mode: IEEE 802.11b 2462MHz Agilent Freq/Channel Trig Free Ch Freq 2.462 GHz Center Freq **Occupied Bandwidth** 2.46200000 GHz Start Freq 2.44200000 GHz Atten 30 dB Ref 20 dBm #Peak Stop Freq 2.48200000 GHz Log 10 dB/ CF Step 4.00000000 MHz Man <u>Auto</u> Freq Offset 0.00000000 Hz Center 2.462 GHz Span 40 MHz #Res BW 300 kHz Sweep 4 ms (401 pts) **#VBW 1 MHz** Signal Track Occupied Bandwidth Occ BW % Pwr 99.00 % On Off x dB -20.00 dB 14.0122 MHz Transmit Freq Error x dB Bandwidth -51.904 kHz 16.314 MHz

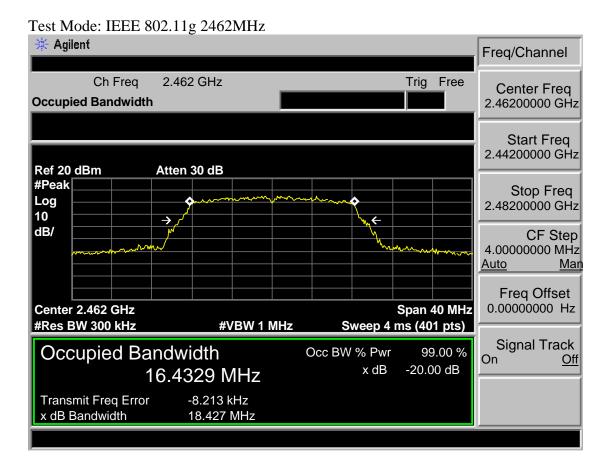


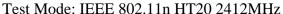
Test Mode: IEEE 802.11g 2412MHz Agilent

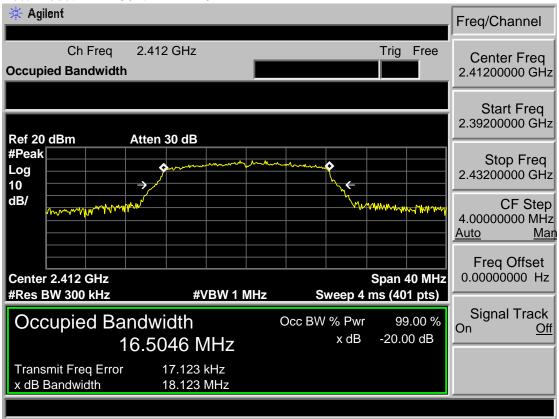


Test Mode: IEEE 802.11g 2437MHz

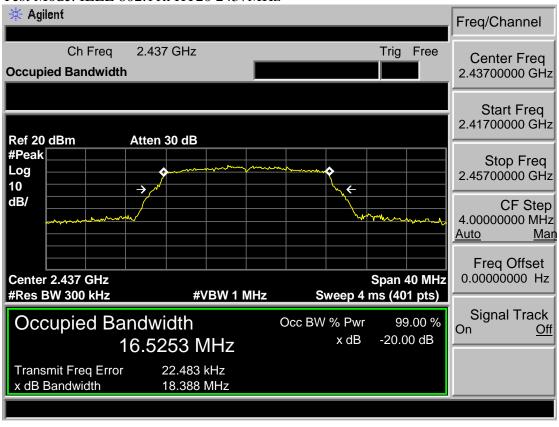


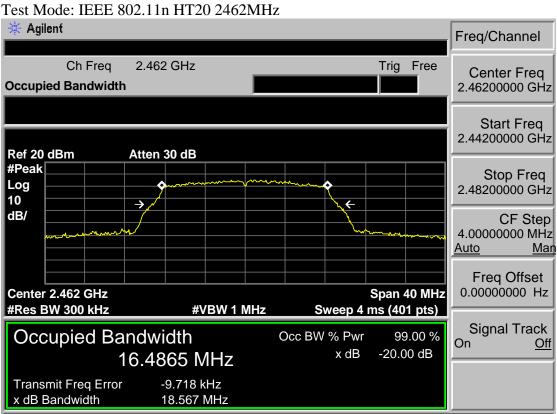


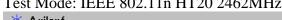




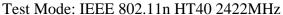
Test Mode: IEEE 802.11n HT20 2437MHz

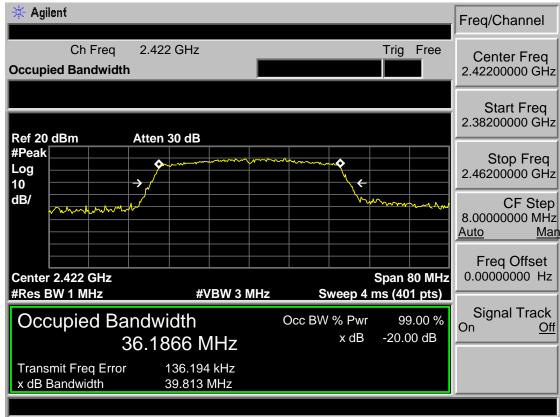




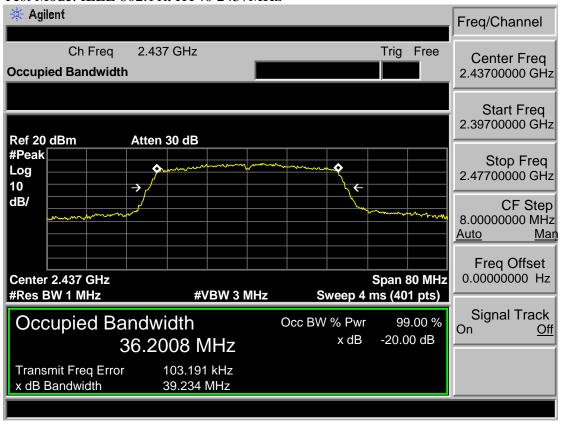


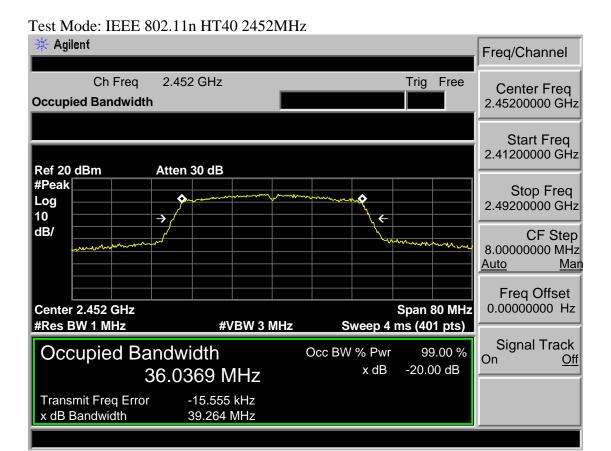






Test Mode: IEEE 802.11n HT40 2437MHz







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

- 1, The transmitter output (antenna port) was connected to the spectrum analyzer. Connect EUT antenna terminal to the spectrum analyzer with a low loss SMA cable.
- 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.



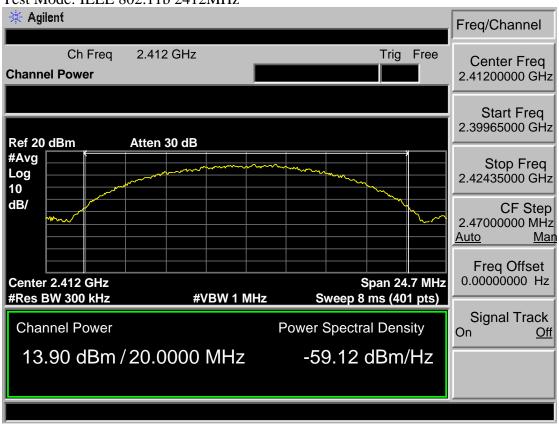
7.3 Test Result

EUT: 55 inch D	LED SMART TV	7			
M/N: E4SFT5:	517				
Test date: 2018.01.24		Test site: RF Site			Tested by: Seven
			Pass		
Test Mode	СН	Conducted Power (dBm)			Limit
		Ant 0	Ant 1	Total	(dBm)
IEEE 802.11 b	CH1	13.90	17.03	/	30
	СН6	13.23	14.58	/	30
	CH11	14.47	14.66	/	30
IEEE 802.11 g	CH1	10.12	14.00	/	30
	СН6	9.83	10.98	/	30
	CH11	10.72	10.79	/	30
IEEE 802.11 n HT 20	CH1	10.13	12.85	14.71	30
	СН6	10.20	10.45	13.34	30
	CH11	10.74	10.53	13.65	30
IEEE 802.11 n HT 40	СНЗ	8.03	10.00	12.14	30
	СН6	8.39	7.90	11.16	30
	СН9	8.32	9.04	11.71	30
Conclusion: PA	ASS				

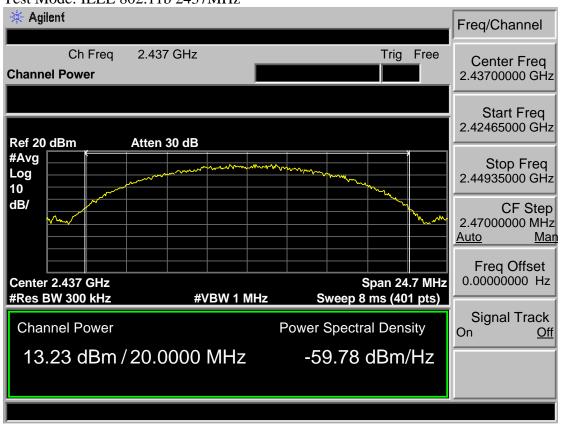
7.4 Test Data

Antenna 0

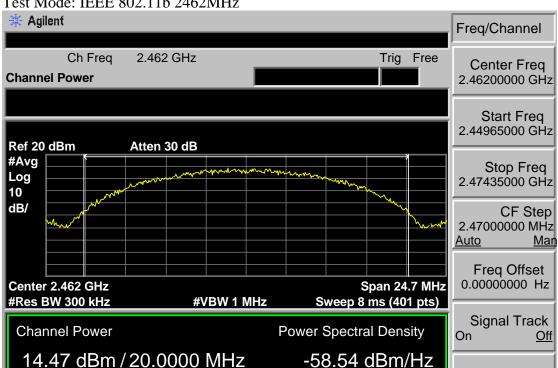
Test Mode: IEEE 802.11b 2412MHz

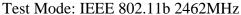


Test Mode: IEEE 802.11b 2437MHz



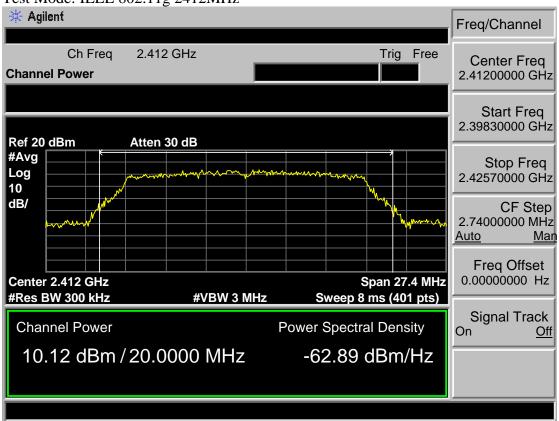




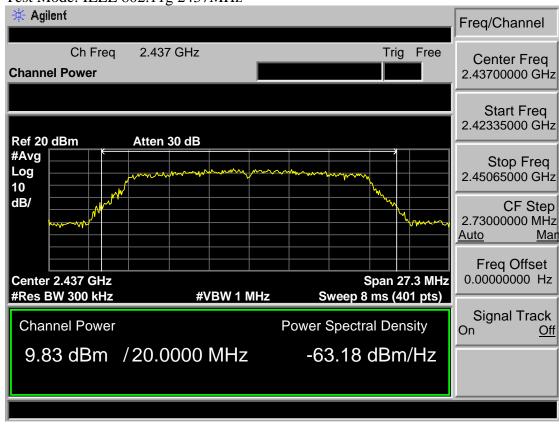


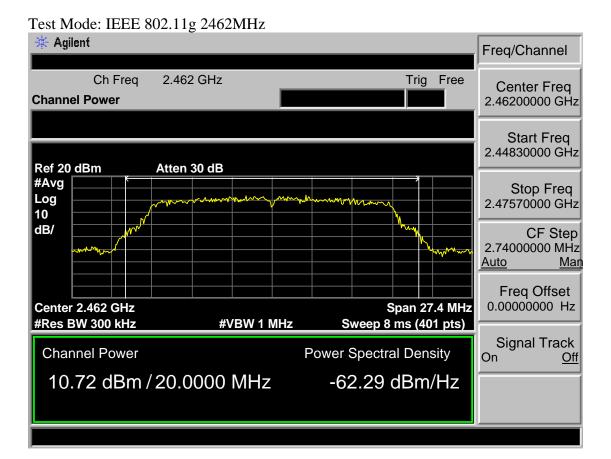


Test Mode: IEEE 802.11g 2412MHz

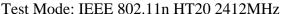


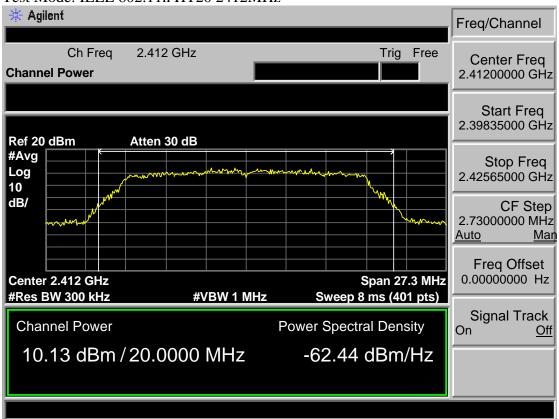
Test Mode: IEEE 802.11g 2437MHz







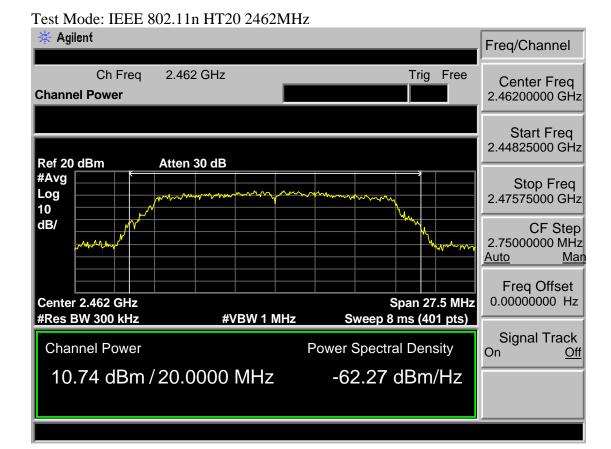




Test Mode: IEEE 802.11n HT20 2437MHz

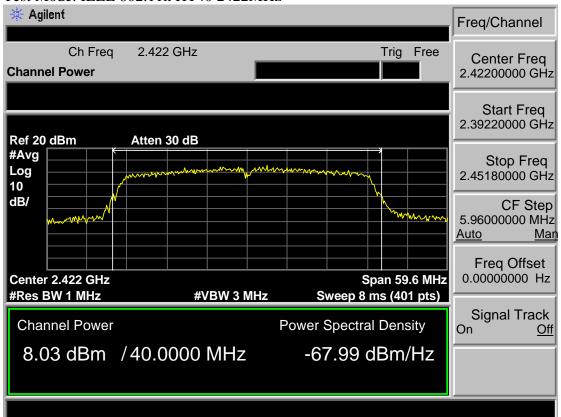








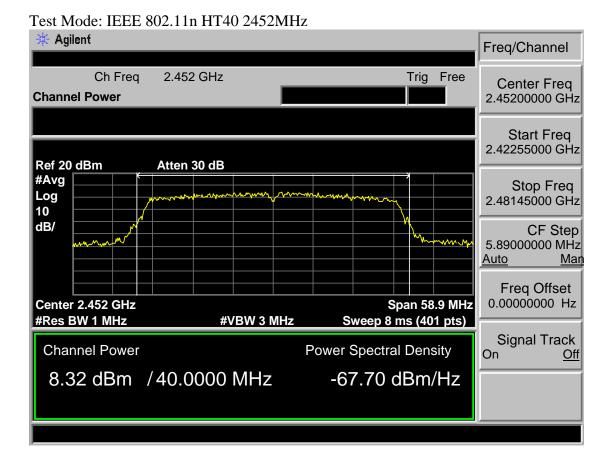




Test Mode: IEEE 802.11n HT40 2437MHz



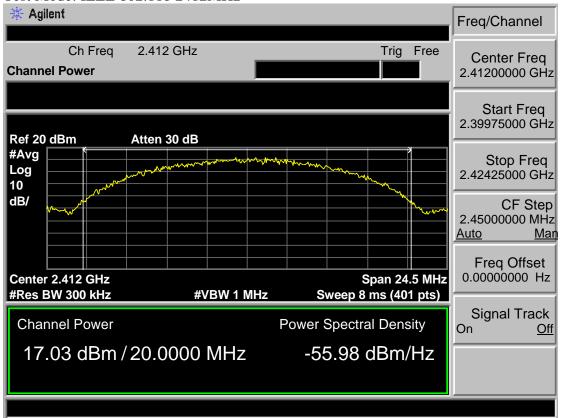




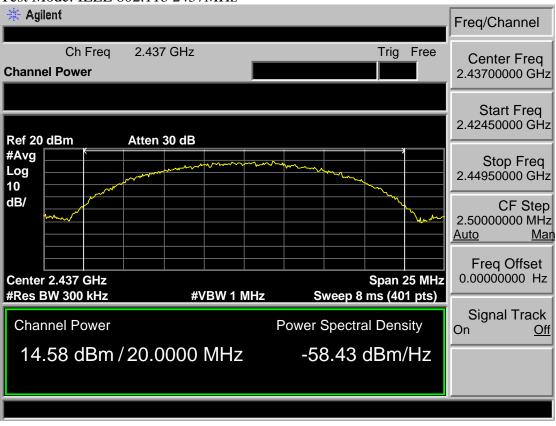


Antenna 1

Test Mode: IEEE 802.11b 2412MHz



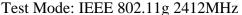
Test Mode: IEEE 802.11b 2437MHz

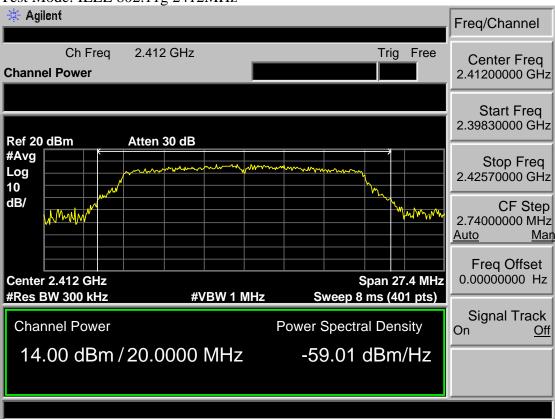




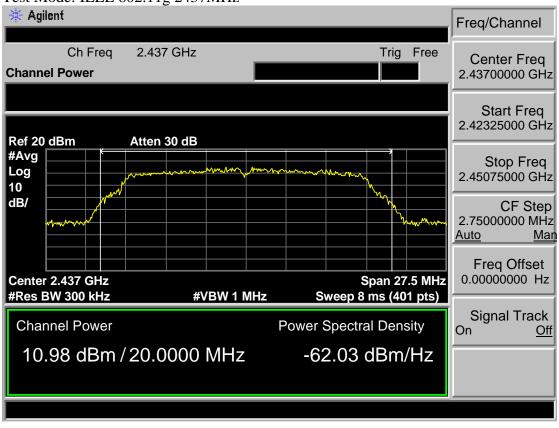
Test Mode: IEEE 802.11b 2462MHz Agilent Freq/Channel Ch Freq 2.462 GHz Trig Free Center Freq **Channel Power** 2.46200000 GHz Start Freq 2.44970000 GHz Ref 20 dBm Atten 30 dB #Avg Stop Freq 2.47430000 GHz Log 10 dB/ CF Step 2.46000000 MHz Man <u>Auto</u> Freq Offset 0.00000000 Hz Center 2.462 GHz Span 24.6 MHz #Res BW 300 kHz **#VBW 1 MHz** Sweep 8 ms (401 pts) Signal Track Channel Power **Power Spectral Density** On Off 14.66 dBm/20.0000 MHz -58.35 dBm/Hz

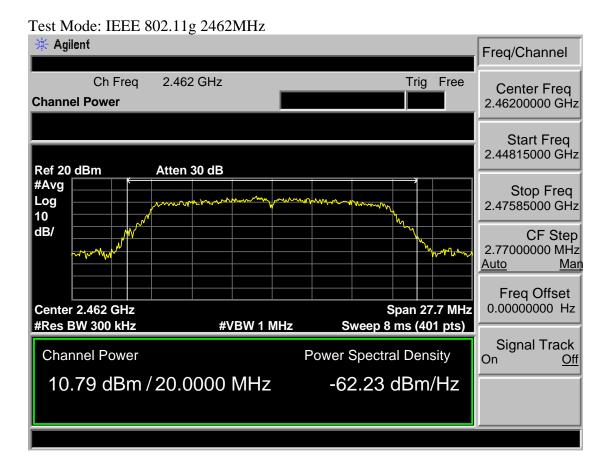




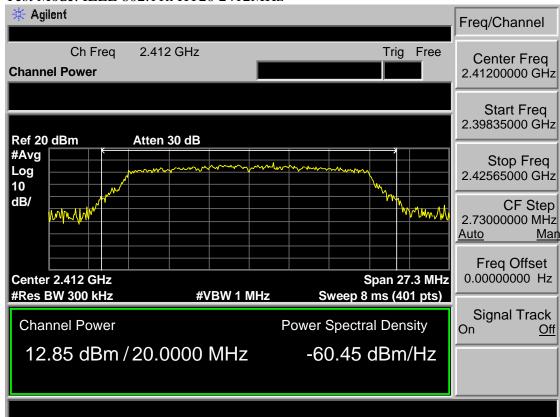


Test Mode: IEEE 802.11g 2437MHz

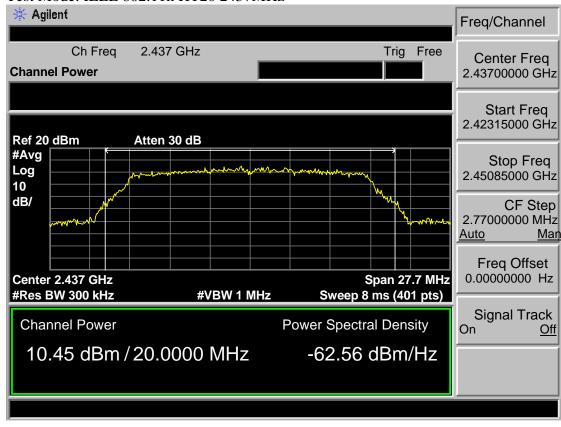




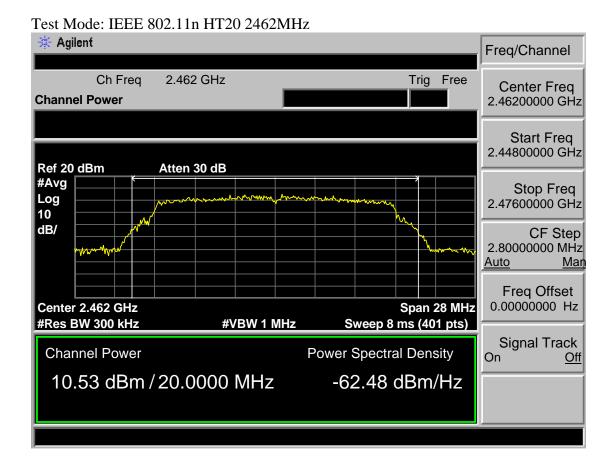




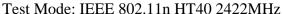
Test Mode: IEEE 802.11n HT20 2437MHz

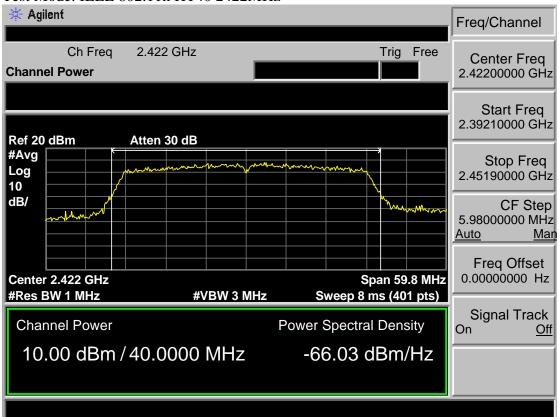




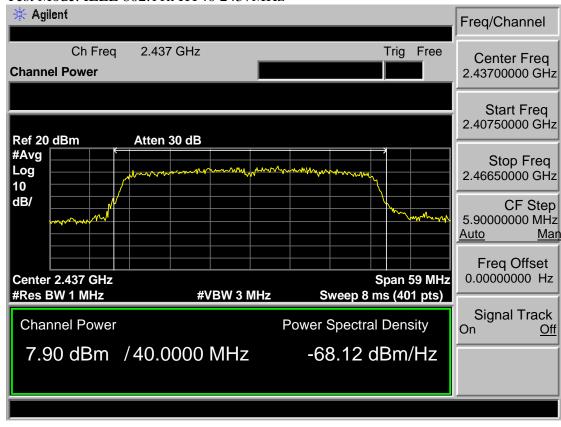




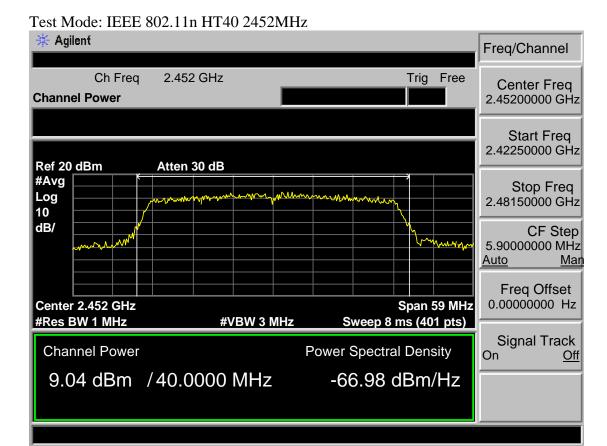




Test Mode: IEEE 802.11n HT40 2437MHz









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, The transmitter output (antenna port) was connected to the spectrum analyzer. Connect EUT antenna terminal to the spectrum analyzer with a low loss SMA cable.
- 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

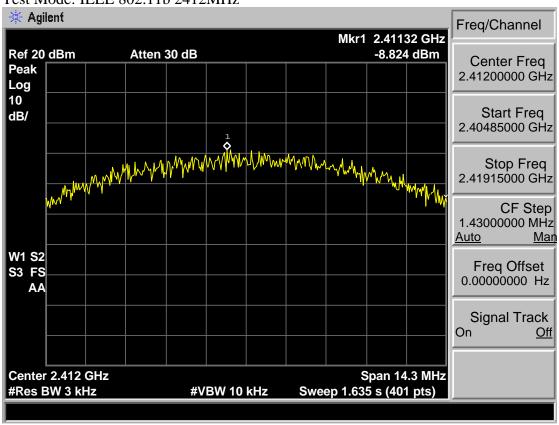
EUT: 55 inch D	LED SMART TV				
M/N: E4SFT551	17				
Test date: 2018.01.24		Test site: RF Site			Tested by: Seven
]	Pass		
Test Mode	СН	Power density (dBm/3kHz)			Limit
		Ant 0	Ant 1	Total	(dBm/3kHz)
IEEE 802.11 b	CH1	-8.824	-7.755	/	8
	СН6	-8.389	-7.516	/	8
	CH11	-7.881	-7.853	/	8
IEEE 802.11 g	CH1	-13.730	-10.820	/	8
	СН6	-12.360	-13.010	/	8
	CH11	-12.170	-12.820	/	8
IEEE 802.11 n HT 20	CH1	-12.560	-11.780	-9.142	8
	СН6	-13.630	-13.060	-10.325	8
	CH11	-13.890	-12.790	-10.295	8
IEEE 802.11 n HT 40	СНЗ	-15.800	-13.420	-11.439	8
	СН6	-14.240	-16.550	-12.233	8
	СН9	-16.980	-15.980	-13.441	8
Conclusion: PA	ASS				



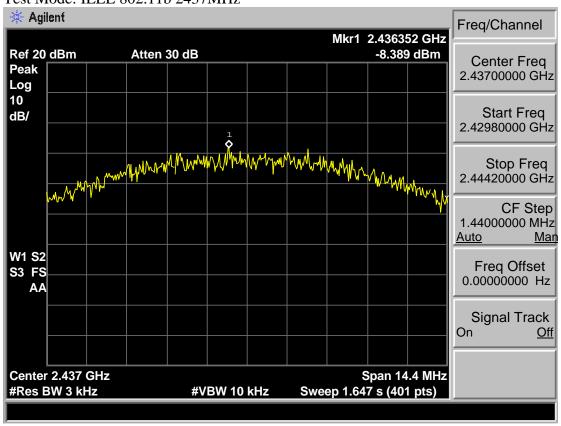
8.4 Test Data

Antenna 0

Test Mode: IEEE 802.11b 2412MHz

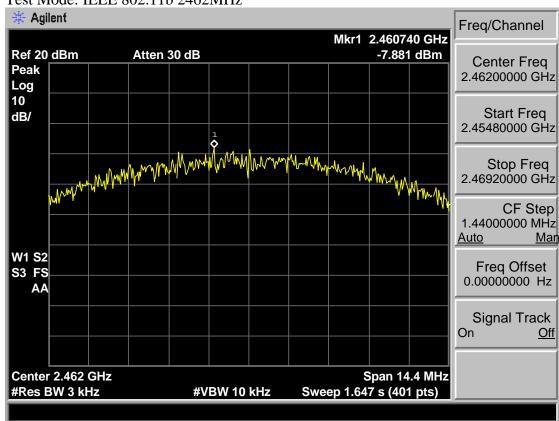


Test Mode: IEEE 802.11b 2437MHz

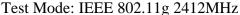


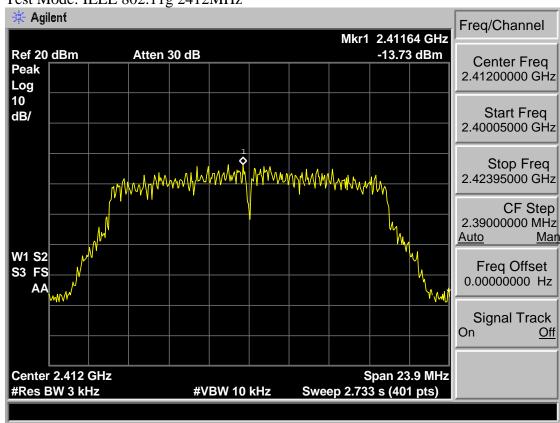


Test Mode: IEEE 802.11b 2462MHz

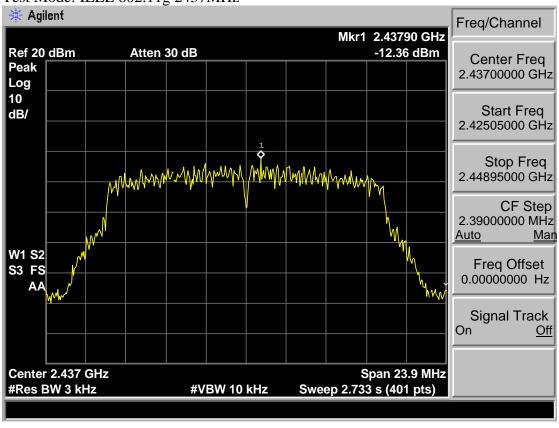








Test Mode: IEEE 802.11g 2437MHz





#Res BW 3 kHz

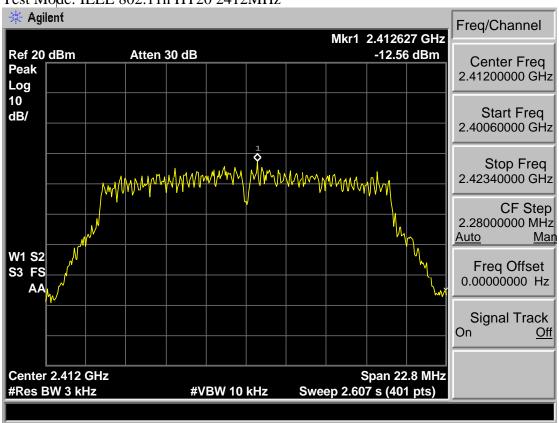
Test Mode: IEEE 802.11g 2462MHz * Agilent Freq/Channel Mkr1 2.46071 GHz Ref 20 dBm Atten 30 dB -12.17 dBm Center Freq Peak 2.46200000 GHz Log 10 Start Freq 2.45025000 GHz dB/ Stop Freq 2.47375000 GHz CF Step 2.35000000 MHz Man Auto W1 S2 S3 FS Freq Offset 0.00000000 Hz AΑ Signal Track On <u>Off</u> Center 2.462 GHz Span 23.5 MHz

#VBW 10 kHz

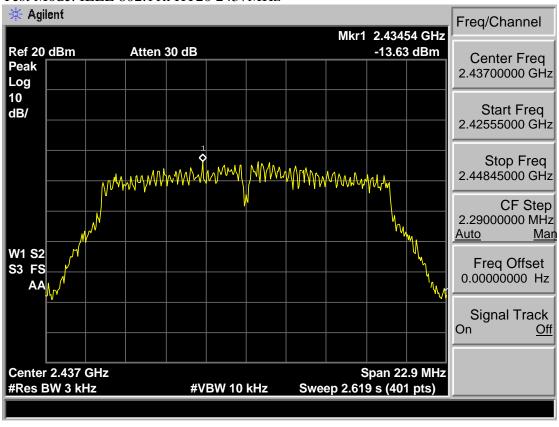


Sweep 2.688 s (401 pts)

Test Mode: IEEE 802.11n HT20 2412MHz

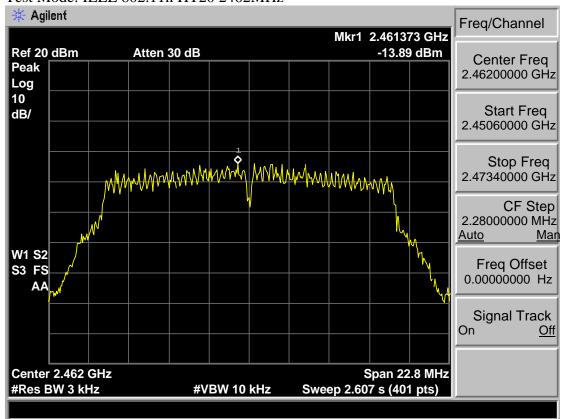


Test Mode: IEEE 802.11n HT20 2437MHz



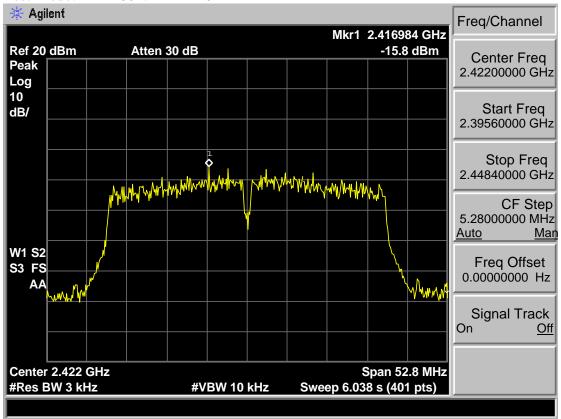


Test Mode: IEEE 802.11n HT20 2462MHz

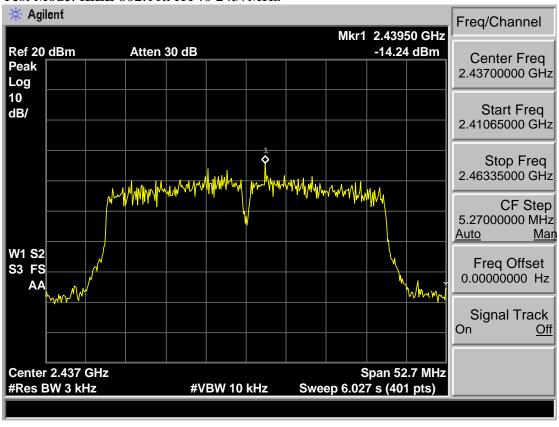






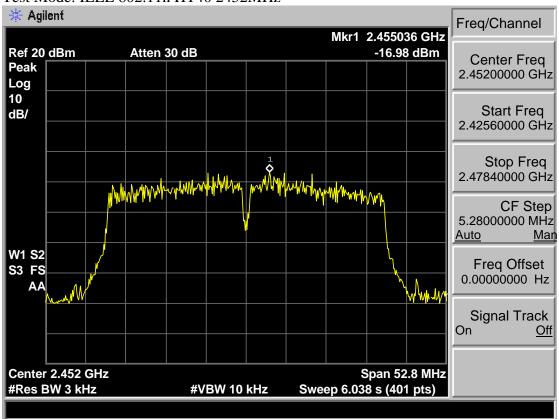


Test Mode: IEEE 802.11n HT40 2437MHz





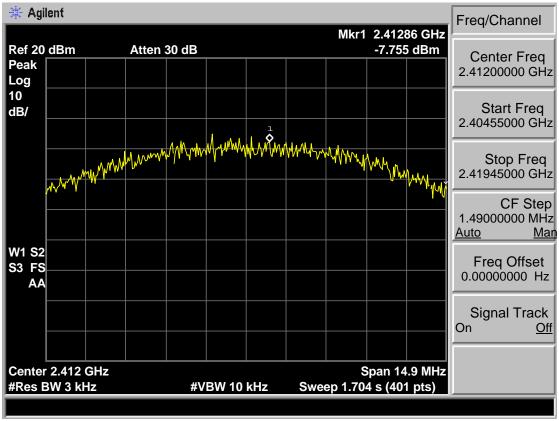
Test Mode: IEEE 802.11n HT40 2452MHz



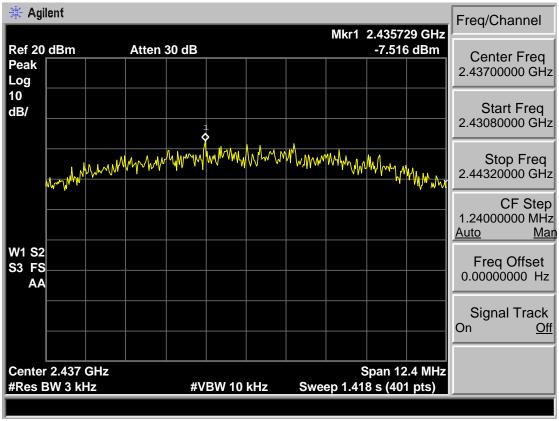


Antenna 1

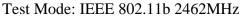
Test Mode: IEEE 802.11b 2412MHz

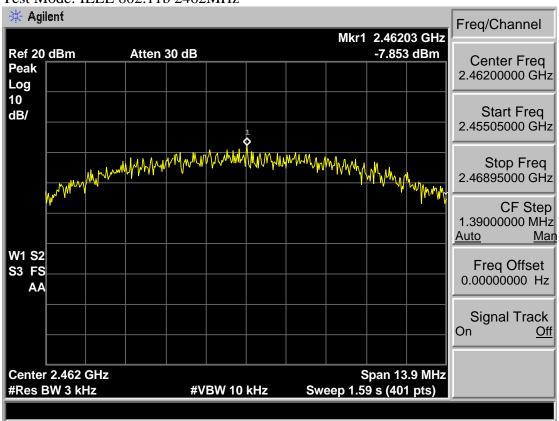


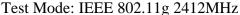
Test Mode: IEEE 802.11b 2437MHz

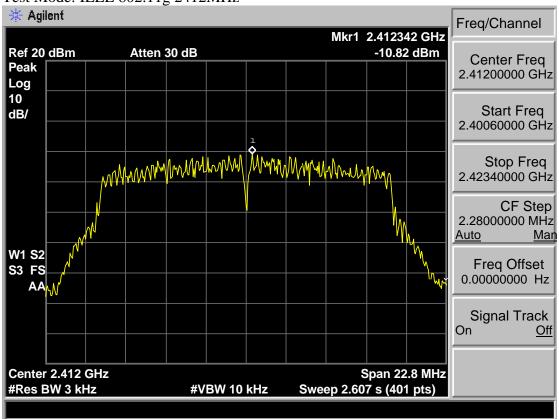




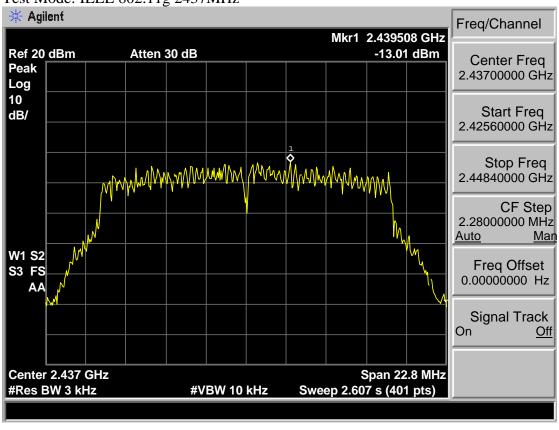


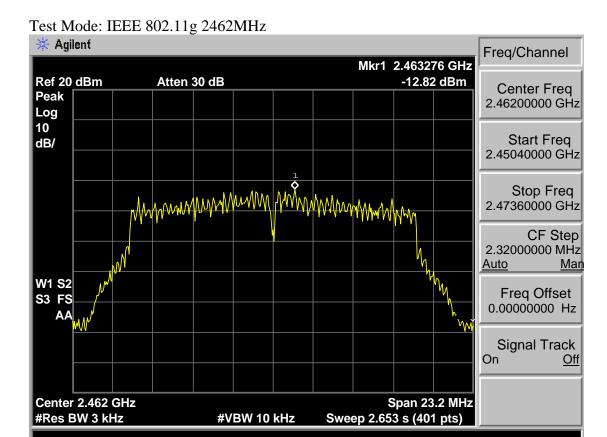




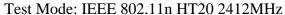


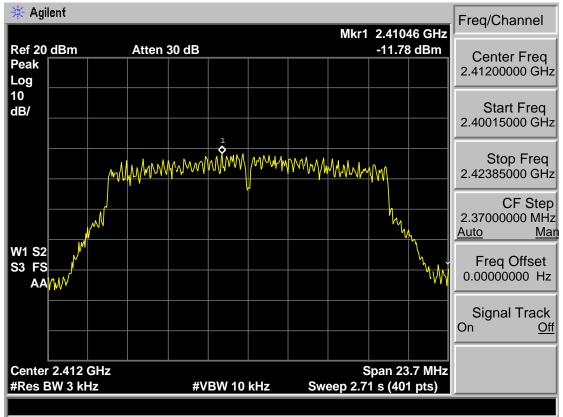
Test Mode: IEEE 802.11g 2437MHz



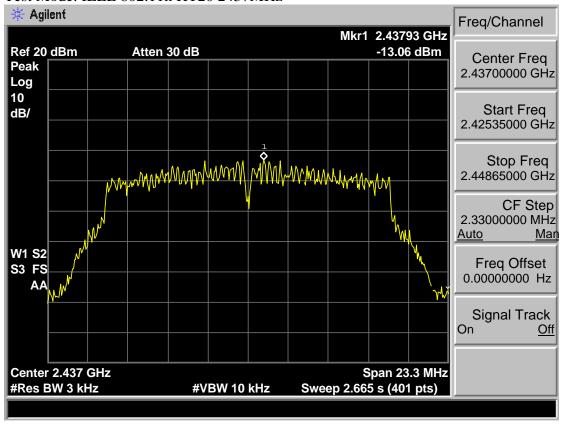




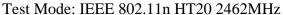


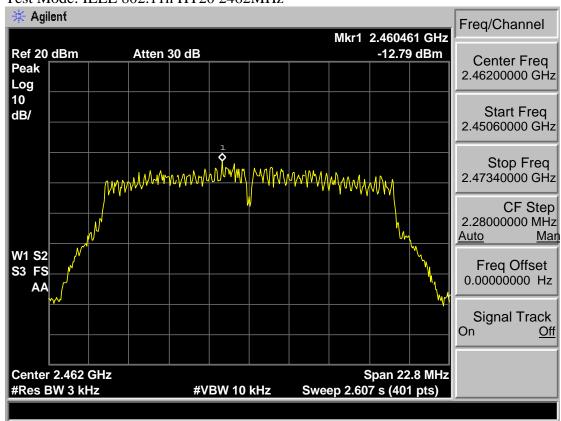


Test Mode: IEEE 802.11n HT20 2437MHz



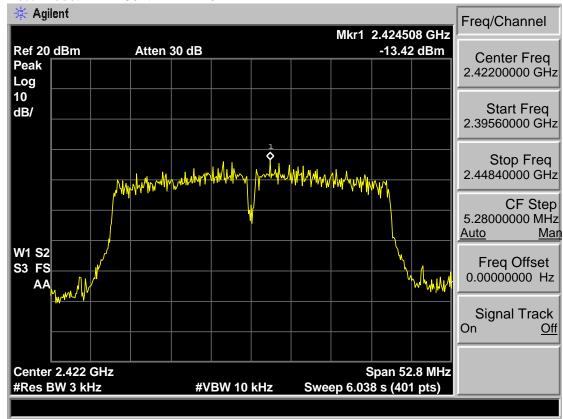




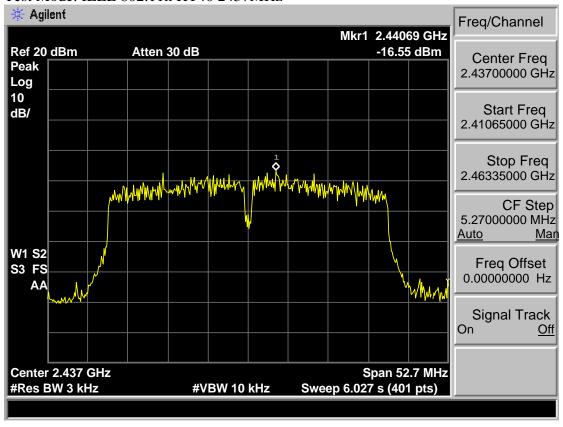




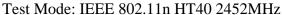


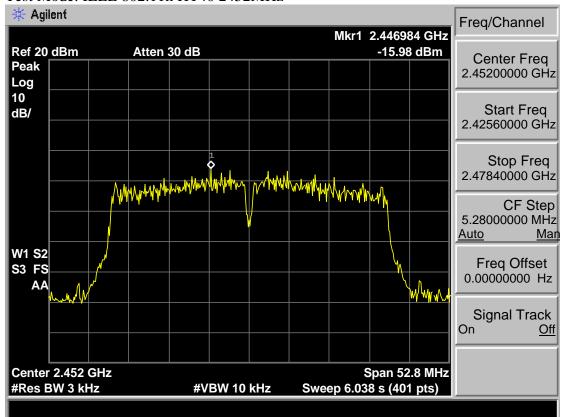


Test Mode: IEEE 802.11n HT40 2437MHz











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.

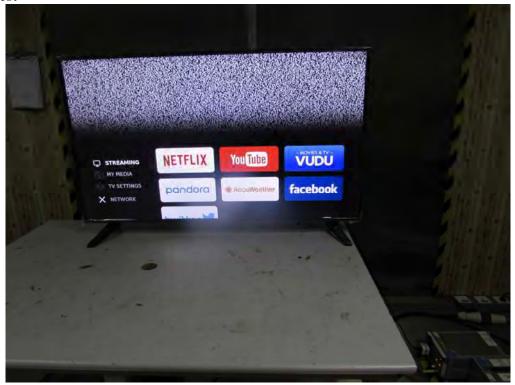
9.2 Result

The antennas used for this product are Internal 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 1.21 dBi.



10 TEST SETUP PHOTO

Conducted Test





Radiated Test (30-1000 MHz)



Radiated Test (Above 1000 MHz)



11 PHOTOS OF EUT

External Photos M/N: E4SFT5517





External Photos M/N: E4SFT5517





External Photos M/N: E4SFT5517





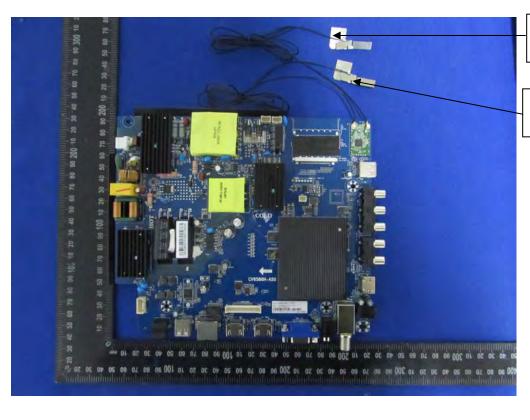
External Photos M/N: E4SFT5517





Internal Photos M/N: E4SFT5517



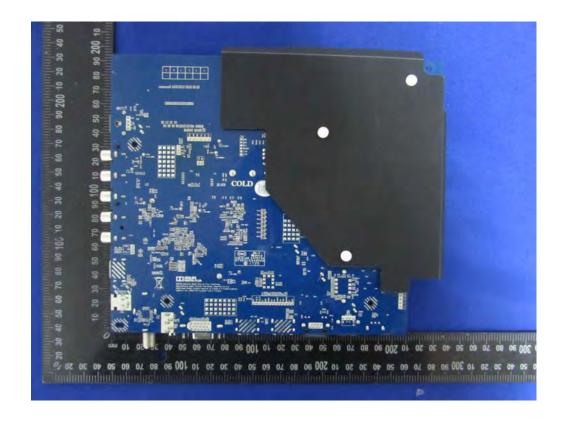


Wi-Fi Antenna 1

Wi-Fi Antenna 0

Internal Photos







Internal Photos M/N: E4SFT5517







Internal Photos M/N: E4SFT5517





