

FCC Test Report

Product Name : UHD551-L

Trade Name : Vestel

Model No. : UHD551-L

FCC ID. : XU6-UHD551L

Applicant: VESTEL TRADE CO.

Address : Organize Sanayi Bölgesi (45030) Manisa/Türkiye

Date of Receipt : Mar. 28, 2017

Issued Date : Apr. 20, 2017

Report No. : 1740037R-RFUSP27V00

Report Version : V1.0





The test results relate only to the samples tested.

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Test Report Certification

Issued Date: Apr. 20, 2017

Report No. : 1740037R-RFUSP27V00



Product Name : UHD551-L

Applicant : VESTEL TRADE CO.

Address : Organize Sanayi Bölgesi (45030) Manisa/Türkiye

Manufacturer : VESTEL TRADE CO.

Model No. : UHD551-L

FCC ID. : XU6-UHD551L

EUT Voltage : AC 100-240V, 50-60Hz

Testing Voltage : AC 120V/60Hz

Trade Name : Vestel

Applicable Standard : FCC CFR Title 47 Part 15 Subpart C Section 15.247: 2015

Test Lab : Hsin Chu Laboratory

Test Result : Complied

The test results relate only to the samples tested.

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		(Roy Wang / Director)



Revision History

Report No.	Version	Description	Issued Date
1740037R-RFUSP27V00	V1.0	Initial issue of report	Apr. 20, 2017

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Laboratory Information

We, **DEKRA Testing and Certification Co., Ltd.**, are an independent RF consultancy that was established the whole facility in our laboratories. The test facility has been accredited/accepted (audited or listed) by the following related bodies in compliance with ISO 17025 specified testing scopes:

Taiwan R.O.C. : TAF, Accreditation Number: 3024

USA : FCC, Registration Number: 834100

IC, Submission No: 181665 / Canada :

IC Registration Number: 22397-1 / 22397-2 / 22397-3

The related certificate for our laboratories about the test site and management system can be downloaded from DEKRA Testing and Certification Co., Ltd. Web Site:

http://www.dekra.com.tw/english/about/certificates.aspx?bval=5

The address and introduction of DEKRA Testing and Certification Co., Ltd. laboratories can be founded in our Web site: http://www.dekra.com.tw/index_en.aspx

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1. General Information

1.1. EUT Description

Product Name	UHD551-L
Trade Name	Vestel
Model No.	UHD551-L
Frequency Range/Channel Number	2402~2480MHz / 79 Channels
Type of Modulation	GFSK, π/4-DQPSK, 8-DPSK

Antenna Information		
Antenna Type	PIFA Antenna	
Antenna Gain	2 dBi	

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Working F	Working Frequency of Each Channel						
Channel	Frequency	Channel	Frequency	Channel	Frequency	Channel	Frequency
Channel 00	2402 MHz	Channel 20	2422 MHz	Channel 40	2442 MHz	Channel 60	2462 MHz
Channel 01	2403 MHz	Channel 21	2423 MHz	Channel 41	2443 MHz	Channel 61	2463 MHz
Channel 02	2404 MHz	Channel 22	2424 MHz	Channel 42	2444 MHz	Channel 62	2464 MHz
Channel 03	2405 MHz	Channel 23	2425 MHz	Channel 43	2445 MHz	Channel 63	2465 MHz
Channel 04	2406 MHz	Channel 24	2426 MHz	Channel 44	2446 MHz	Channel 64	2466 MHz
Channel 05	2407 MHz	Channel 25	2427 MHz	Channel 45	2447 MHz	Channel 65	2467 MHz
Channel 06	2408 MHz	Channel 26	2428 MHz	Channel 46	2448 MHz	Channel 66	2468 MHz
Channel 07	2409 MHz	Channel 27	2429 MHz	Channel 47	2449 MHz	Channel 67	2469 MHz
Channel 08	2410 MHz	Channel 28	2430 MHz	Channel 48	2450 MHz	Channel 68	2470 MHz
Channel 09	2411 MHz	Channel 29	2431 MHz	Channel 49	2451 MHz	Channel 69	2471 MHz
Channel 10	2412 MHz	Channel 30	2432 MHz	Channel 50	2452 MHz	Channel 70	2472 MHz
Channel 11	2413 MHz	Channel 31	2433 MHz	Channel 51	2453 MHz	Channel 71	2473 MHz
Channel 12	2414 MHz	Channel 32	2434 MHz	Channel 52	2454 MHz	Channel 72	2474 MHz
Channel 13	2415 MHz	Channel 33	2435 MHz	Channel 53	2455 MHz	Channel 73	2475 MHz
Channel 14	2416 MHz	Channel 34	2436 MHz	Channel 54	2456 MHz	Channel 74	2476 MHz
Channel 15	2417 MHz	Channel 35	2437 MHz	Channel 55	2457 MHz	Channel 75	2477 MHz
Channel 16	2418 MHz	Channel 36	2438 MHz	Channel 56	2458 MHz	Channel 76	2478 MHz
Channel 17	2419 MHz	Channel 37	2439 MHz	Channel 57	2459 MHz	Channel 77	2479 MHz
Channel 18	2420 MHz	Channel 38	2440 MHz	Channel 58	2460 MHz	Channel 78	2480 MHz
Channel 19	2421 MHz	Channel 39	2441 MHz	Channel 59	2461 MHz		

- 1. This device is a UHD551-L including 2.4GHz b/g/n (2x2), BT2.0, BT4.0 and 5GHz a/n (2x2) transmitting and receiving function.
- 2. Regards to the frequency band operation; the lowest \ middle and highest frequency of channel were selected to perform the test, and then shown on this report.
- 3. This device is a composite device in accordance with Part 15 regulations. The receiving function was tested and its number is 1740037R-RFUSP01V00.



1.2. Test Mode

DEKRA has verified the construction and function in typical operation. All the test modes were carried out with the EUT in transmitting operation, which was shown in this test report and defined as follows:

Test Mode				
TX Mode 1: Tx_DH5				
	Mode 2: Tx_2DH5			
	Mode 3: Tx_3DH5			

Emission	Mode 1	Mode 2	Mode 3
Conducted Emission	No	No	Yes
Peak Power Output	Yes	Yes	Yes
Radiated Emission	Yes	Yes	Yes
RF antenna conducted test	Yes	Yes	Yes
Band Edge	Yes	Yes	Yes
Number of hopping Frequency	Yes	No	No
Carrier Frequency Separation	Yes	Yes	Yes
Occupied Bandwidth	Yes	Yes	Yes
Dwell Time	Yes	Yes	Yes

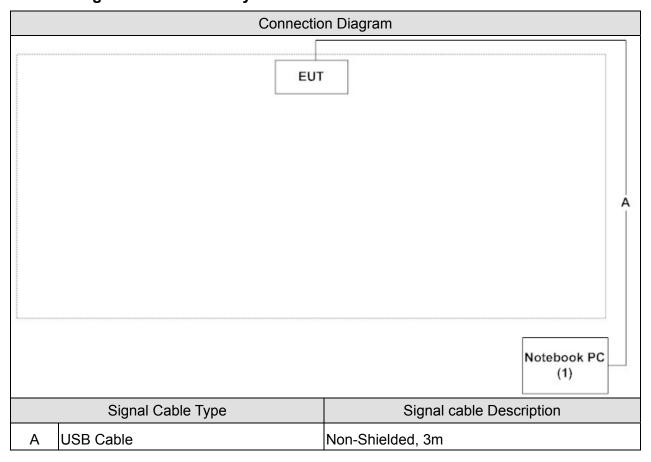


1.3. Tested System Details

The types for all equipments, plus descriptions of all cables used in the tested system (including inserted cards) are:

Product	Manufacturer	Model No.	Serial No.	FCC ID	Power Cord
1 Notebook PC	ASUS	X522EP	E5N0CV04326	DoC	Non-Shielded, 1.8m,
			4197		one ferrite core bonded

1.4. Configuration of tested System



1.5. EUT Exercise Software

1	Setup the EUT as shown in Section 1.4.
2	Execute the test program "Bluetool".
3	Configure the test mode, the test channel, and the data rate.
4	Press "Start TX" to start the continuous transmitting.
5	Verify that the EUT works properly.

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1.6. Test Facility

Ambient conditions in the laboratory:

Items	Test Item	Required (IEC 68-1)	Actual
Temperature (°C)	FOC DADT 45 C 45 007	15 - 35	23
Humidity (%RH)	FCC PART 15 C 15.207	25 - 75	50
Barometric pressure (mbar)	Conducted Emission (FHSS)	860 - 1060	950-1000
Temperature (°C)	FOO DADT 45 O 45 047	15 - 35	24
Humidity (%RH)	FCC PART 15 C 15.247 Peak Power Output (FHSS)	25 - 75	45
Barometric pressure (mbar)	reak rowel Output (rnoo)	860 - 1060	950-1000
Temperature (°C)	FOO DADT 45 O 45 047	15 - 35	25
Humidity (%RH)	FCC PART 15 C 15.247	25 - 75	54
Barometric pressure (mbar)	Radiated Emission (FHSS)	860 - 1060	950-1000
Temperature (°C)	FOO DADT 45 O 45 047	15 - 35	25
Humidity (%RH)	FCC PART 15 C 15.247	25 - 75	50
Barometric pressure (mbar)	Band Edge (FHSS)	860 - 1060	950-1000
Temperature (°C)	FCC PART 15 C 15.247	15 - 35	24
Humidity (%RH)	Number of hopping Frequency	25 - 75	45
Barometric pressure (mbar)	(FHSS)	860 - 1060	950-1000
Temperature (°C)	FCC PART 15 C 15.247	15 - 35	24
Humidity (%RH)	Carrier Frequency Separation	25 - 75	45
Barometric pressure (mbar)	(FHSS)	860 - 1060	950-1000
Temperature (°C)	FOO DADT 45 O 45 047	15 - 35	24
Humidity (%RH)	FCC PART 15 C 15.247	25 - 75	45
Barometric pressure (mbar)	Occupied Bandwidth (FHSS)	860 - 1060	950-1000
Temperature (°C)	FCC PART 15 C 15.247	15 - 35	24
Humidity (%RH)	RF antenna conducted test	25 - 75	45
Barometric pressure (mbar)	(FHSS)	860 - 1060	950-1000
Temperature (°C)	FOC DADT 45 C 45 047	15 - 35	24
Humidity (%RH)	FCC PART 15 C 15.247 Dwell Time (FHSS)	25 - 75	45
Barometric pressure (mbar)	Dweir fillie (i 1100)	860 - 1060	950-1000

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2. Conducted Emission

2.1. Test Equipment

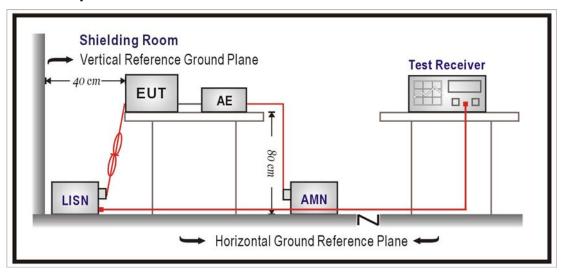
The following test equipments are used during the test:

Conducted Emission / SR2-H

Instrument	Manufacturer	Model No.	Serial No	Next Cal. Date
Artificial Mains Network	R&S	ENV4200	848411/010	2018/02/05
LISN	R&S	ENV216	100092	2017/08/16
Test Receiver	R&S	ESCS 30	836858/022	2018/01/14

Note: All equipments that need to calibrate are with calibration period of 1 year.

2.2. Test Setup





2.3. Limits

FCC Part 15 Subpart C Paragraph 15.207 Limits (dBuV)				
Frequency MHz	QP	AV		
0.15 - 0.50	66 - 56	56 - 46		
0.50 - 5.0	56	46		
5.0 - 30	60	50		

Remarks: In the above table, the tighter limit applies at the band edges.

2.4. Test Procedure

The EUT and simulators are connected to the main power through a line impedance stabilization network (L.I.S.N.). This provides a 50 ohm /50uH coupling impedance for the measuring equipment. The peripheral devices are also connected to the main power through a LISN that provides a 50ohm /50uH coupling impedance with 50ohm termination. (Please refer to the block diagram of the test setup and photographs.)

Both sides of A.C. line are checked for maximum conducted interference. In order to find the maximum emission, the relative positions of equipment and all of the interface cables must be changed according to ANSI C63.10:2009 on conducted measurement.

Conducted emissions were invested over the frequency range from 0.15MHz to 30MHz using a receiver bandwidth of 9 kHz.

2.5. Test Specification

According to FCC Part 15 Subpart C Paragraph 15.207: 2015

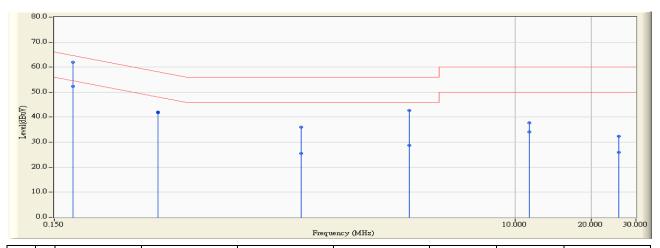
2.6. Uncertainty

The measurement uncertainty is defined as \pm 2.26 dB.



2.7. Test Result

Site : SR2-H	Time : 2017/04/13
Limit : CISPR_B_00M_QP	Margin : 10
Probe : SR2-H_LISN(16A)-6_0712 - Line1	Power : AC 120V/60Hz
EUT : UHD551-L	Note: Mode 3: Tx_3DH5_2441MHz

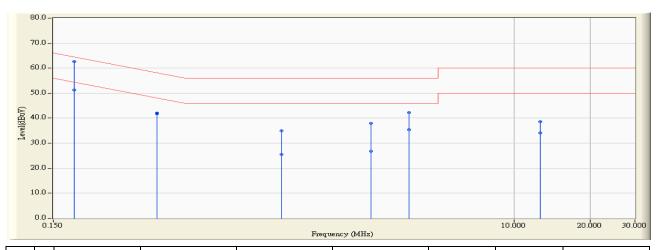


		Frequency	Correct Factor	Reading Level	Measure Level	Margin	Limit	Detector Type
		(MHz)	(dB)	(dBuV)	(dBuV)	(dB)	(dBuV)	
1		0.177	9.752	52.260	62.012	-2.597	64.609	QUASIPEAK
2	*	0.177	9.752	42.540	52.292	-2.317	54.609	AVERAGE
3		0.384	9.732	32.270	42.002	-16.183	58.184	QUASIPEAK
4		0.384	9.732	32.000	41.732	-6.453	48.184	AVERAGE
5		1.420	9.837	26.200	36.037	-19.963	56.000	QUASIPEAK
6		1.420	9.837	15.720	25.557	-20.443	46.000	AVERAGE
7		3.806	9.914	32.690	42.604	-13.396	56.000	QUASIPEAK
8		3.806	9.914	18.790	28.704	-17.296	46.000	AVERAGE
9		11.322	10.153	27.630	37.784	-22.216	60.000	QUASIPEAK
10		11.322	10.153	24.000	34.154	-15.846	50.000	AVERAGE
11		25.587	10.326	22.120	32.446	-27.554	60.000	QUASIPEAK
12		25.587	10.326	15.620	25.946	-24.054	50.000	AVERAGE

- 1. All Reading Levels are Quasi-Peak and average value.
- 2. " * ", means this data is the worst emission level.
- 3. Measurement Level = Reading Level + Correct Factor.



Site : SR2-H	Time : 2017/04/13
Limit : CISPR_B_00M_QP	Margin : 10
Probe : SR2-H_LISN(16A)-6_0712 - Line2	Power : AC 120V/60Hz
EUT : UHD551-L	Note: Mode 3: Tx_3DH5_2441MHz



		Frequency	Correct Factor	Reading Level	Measure Level	Margin	Limit	Detector Type
		(MHz)	(dB)	(dBuV)	(dBuV)	(dB)	(dBuV)	
1	*	0.181	9.752	52.930	62.682	-1.746	64.428	QUASIPEAK
2		0.181	9.752	41.490	51.242	-3.186	54.428	AVERAGE
3		0.384	9.750	32.310	42.060	-16.124	58.184	QUASIPEAK
4		0.384	9.750	32.000	41.750	-6.434	48.184	AVERAGE
5		1.201	9.826	25.240	35.066	-20.934	56.000	QUASIPEAK
6		1.201	9.826	15.620	25.446	-20.554	46.000	AVERAGE
7		2.716	9.846	28.090	37.936	-18.064	56.000	QUASIPEAK
8		2.716	9.846	17.060	26.906	-19.094	46.000	AVERAGE
9		3.822	9.841	32.490	42.331	-13.669	56.000	QUASIPEAK
10		3.822	9.841	25.490	35.331	-10.669	46.000	AVERAGE
11		12.630	10.235	28.450	38.684	-21.316	60.000	QUASIPEAK
12		12.630	10.235	23.780	34.014	-15.986	50.000	AVERAGE

- 1. All Reading Levels are Quasi-Peak and average value.
- 2. " * ", means this data is the worst emission level.
- 3. Measurement Level = Reading Level + Correct Factor.

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3. Peak Power Output

3.1. Test Equipment

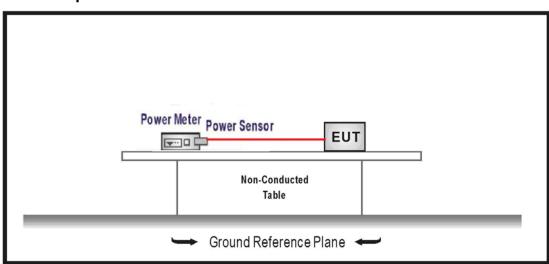
The following test equipment is used during the test:

Peak Power Output / SR10-H

Instrument	Manufacturer	Model No.	Serial No	Next Cal. Date
High Speed Peak Power	Anritsu	ML2496A	1602004	2018/01/19
Meter Dual Input				
Pulse Power Sensor	Anritsu	MA2411B	1531043	2018/01/19
Pulse Power Sensor	Anritsu	MA2411B	1531044	2018/01/19

Note: All equipment upon which need to calibrated are with calibration period of 1 year.

3.2. Test Setup



3.3. Test procedures

The EUT was setup according to ANSI C63.10:2013 and tested according to FHSS test procedure of FCC Public Notice DA 00-705 for compliance to FCC 47CFR 15.247 requirements

3.4. Limits

For frequency hopping systems operating in the 902-928 MHz band: 1 Watt for systems employing at least 50 hopping channels; and, 0.25 Watts for systems employing less than 50 hopping channels.

For frequency hopping systems in the 2400-2483.5 MHz band employing at least 75 hopping channels, and all frequency hopping systems in the 5725-5850 MHz band: 1Watt.

For all other frequency hopping systems in the 2400-2483.5 MHz band: 0.125 Watt.

3.5. Test Specification

According to FCC Part 15 Subpart C Paragraph 15.247: 2015.



3.6. Test Result

Product	UHD551-L		
Test Item	Peak Power Output		
Test Mode	Mode 1: Tx_DH5		
Date of Test	2017/03/21	Test Site	SR10-H

GFSK

Channel No.	Frequency (MHz)	Measure Level (dBm)	Limit (dBm)	Result
00	2402	-1.160	30	Pass
39	2441	-1.020	30	Pass
78	2480	-0.970	30	Pass

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Product	UHD551-L		
Test Item	Peak Power Output		
Test Mode	Mode 2: Tx_2DH5		
Date of Test	2017/03/21	Test Site	SR10-H

π/4-DQPSK

Channel No.	Frequency (MHz)	Measure Level (dBm)	Limit (dBm)	Result
00	2402	1.620	30	Pass
39	2441	1.890	30	Pass
78	2480	1.920	30	Pass

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Product	UHD551-L		
Test Item	Peak Power Output		
Test Mode	Mode 3: Tx_3DH5		
Date of Test	2017/03/21	Test Site	SR10-H

8-DPSK

Channel No.	Frequency (MHz)	Measure Level (dBm)	Limit (dBm)	Result
00	2402	2.190	30	Pass
39	2441	2.370	30	Pass
78	2480	2.540	30	Pass

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4. Radiated Emission

4.1. Test Equipment

The following test equipments are used during the test:

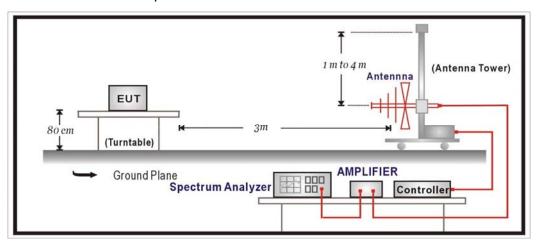
Radiated Emission / CB4-H

Instrument	Manufacturer	Model No.	Serial No	Next Cal. Date
Bilog Antenna	Schaffner	CBL6112B	2891	2017/08/14
Horn Antenna	Schwarzbeck	BBHA 9120	D312	2017/10/25
Pre-Amplifier	EMCI	EMC0031835	980233	2018/02/02
Pre-Amplifier	Schwarzbeck	DBL-1840N506	013	2017/09/29
Pre-Amplifier	Miteq	JS41-001040000-58-5P	1573954	2017/10/04
Horn Antenna	Schwarzbeck	BBHA 9170	203	2017/08/28
Signal & Spectrum	R&S	FSV40	101049	2018/01/22
Analyzer				

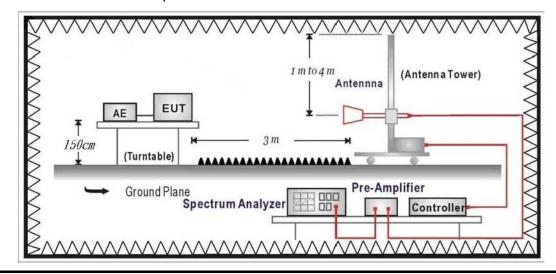
Note: All equipments that need to calibrate are with calibration period of 1 year.

4.2. Test Setup

Under 1GHz Test Setup:



Above 1GHz Test Setup:



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4.3. Limits

Emissions radiated outside of the specified frequency bands, except for harmonics, shall be attenuated by at least 20dB below the level of the fundamental or to the general radiated emission limits in paragraph 15.209, whichever is the lesser attenuation.

FCC Part 15 Subpart C Paragraph 15.209 Limits				
Frequency MHz	uV/m	dBuV/m		
30 - 88	100	40		
88 - 216	150	43.5		
216 - 960	200	46		
Above 960	500	54		

Remarks: 1. RF Voltage (dBuV) = 20 log RF Voltage (uV)

- 2. In the Above Table, the tighter limit applies at the band edges.
- 3. Distance refers to the distance in meters between the measuring instrument antenna and the closed point of any part of the device or system.

4.4. Test Procedure

The EUT was setup according to ANSI C63.10:2013 and tested according to FHSS test procedure of FCC Public Notice DA 00-705 for compliance to FCC 47CFR 15.247 requirements.

The EUT and its simulators are placed on a turn table which is 0.8 or 1.5 meter above ground. The turn table can rotate 360 degrees to determine the position of the maximum emission level.

The antenna can move 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 measurement. In order to find the maximum emission, all of the interface cables must be manipulated according to ANSI C63.10:2013 on radiated measurement.

On any frequency or frequencies below or equal to 1000 MHz, the limits shown are based on measuring equipment employing a quasi-peak detector function and on any frequency or frequencies above 1000 MHz the radiated limits shown are based upon the use of measurement instrumentation employing an average detector function. When average radiated emission measurement are included emission measurement below 1000 MHz, there also is a limit on the radio frequency emissions, as measured using instrumentation with a peak detector function, corresponding to 20 dB above the maximum permitted average limit. The bandwidth below 1GHz setting on the field strength meter is 120 kHz and above 1GHz is 1MHz.

4.5. Test Specification

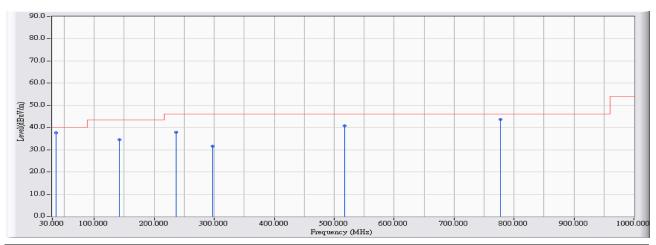
According to FCC Part 15 Subpart C Paragraph 15.247: 2015



4.6. Test Result

30MHz-1GHz Spurious

Site : CB4-H	Time : 2017/04/13
Limit : FCC_CLASS_B_03M_QP	Margin: 0
Probe : CB4-H_FCC_EFS_S2_30M-1GHz_1116 -	Power : AC 120V/60Hz
HORIZONTAL	
EUT : UHD551-L	Note : Mode 1: Tx_DH5_2441MHz

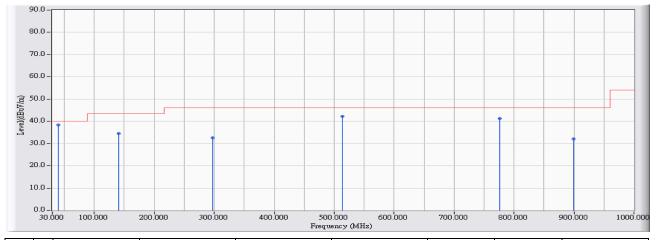


		Frequency	Correct Factor	Reading Level	Measure Level	Margin	Limit	Detector Type
		(MHz)	(dB)	(dBuV)	(dBuV/m)	(dB)	(dBuV/m)	
1		35.820	-16.715	54.330	37.614	-2.386	40.000	QUASIPEAK
2		141.550	-21.688	56.303	34.616	-8.884	43.500	QUASIPEAK
3		236.125	-21.060	58.824	37.764	-8.236	46.000	QUASIPEAK
4		297.235	-19.379	50.939	31.561	-14.439	46.000	QUASIPEAK
5		517.910	-13.563	54.434	40.871	-5.129	46.000	QUASIPEAK
6	*	777.385	-9.792	53.504	43.713	-2.287	46.000	QUASIPEAK

- 1. All Reading Levels are Quasi-Peak value.
- 2. "*", means this data is the worst emission level.
- 3. Measurement Level = Reading Level + Correct Factor



Site : CB4-H	Time : 2017/04/13
Limit : FCC_CLASS_B_03M_QP	Margin: 0
Probe : CB4-H_FCC_EFS_S2_30M-1GHz_1116 -	Power : AC 120V/60Hz
VERTICAL	
EUT : UHD551-L	Note : Mode 1: Tx_DH5_2441MHz

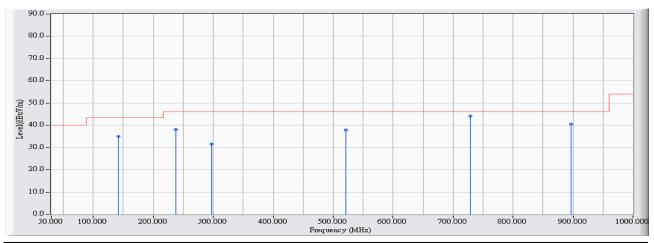


		Frequency	Correct Factor	Reading Level	Measure Level	Margin	Limit	Detector Type
		(MHz)	(dB)	(dBuV)	(dBuV/m)	(dB)	(dBuV/m)	
1	*	40.185	-16.775	55.255	38.480	-1.520	40.000	QUASIPEAK
2		140.580	-21.629	56.108	34.480	-9.020	43.500	QUASIPEAK
3		297.235	-19.379	51.988	32.610	-13.390	46.000	QUASIPEAK
4		514.030	-13.576	55.728	42.152	-3.848	46.000	QUASIPEAK
5		776.415	-9.877	51.041	41.163	-4.837	46.000	QUASIPEAK
6		899.120	-8.786	40.879	32.093	-13.907	46.000	QUASIPEAK

- 1. All Reading Levels are Quasi-Peak value.
- 2. "*", means this data is the worst emission level.
- 3. Measurement Level = Reading Level + Correct Factor



Site : CB4-H	Time : 2017/04/13
Limit : FCC_CLASS_B_03M_QP	Margin: 0
Probe : CB4-H_FCC_EFS_S2_30M-1GHz_1116 -	Power : AC 120V/60Hz
HORIZONTAL	
EUT : UHD551-L	Note : Mode 2: Tx_2DH5_2441MHz

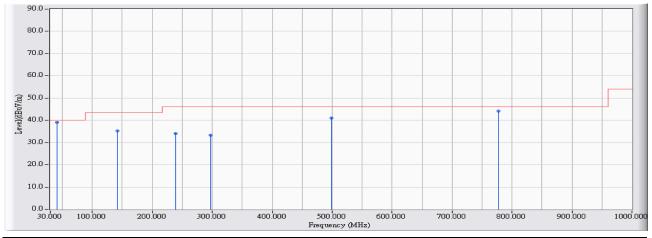


		Frequency	Correct Factor	Reading Level	Measure Level	Margin	Limit	Detector Type
		(MHz)	(dB)	(dBuV)	(dBuV/m)	(dB)	(dBuV/m)	
1		141.550	-21.688	56.584	34.897	-8.603	43.500	QUASIPEAK
2		237.095	-21.005	59.057	38.052	-7.948	46.000	QUASIPEAK
3		297.235	-19.379	50.926	31.548	-14.452	46.000	QUASIPEAK
4		521.790	-13.618	51.436	37.818	-8.182	46.000	QUASIPEAK
5	*	729.370	-10.583	54.806	44.224	-1.776	46.000	QUASIPEAK
6		896.695	-8.657	49.310	40.654	-5.346	46.000	QUASIPEAK

- 1. All Reading Levels are Quasi-Peak value.
- 2. "*", means this data is the worst emission level.
- 3. Measurement Level = Reading Level + Correct Factor



Site : CB4-H	Time : 2017/04/13
Limit : FCC_CLASS_B_03M_QP	Margin : 0
Probe : CB4-H_FCC_EFS_S2_30M-1GHz_1116 -	Power : AC 120V/60Hz
VERTICAL	
EUT : UHD551-L	Note : Mode 2: Tx_2DH5_2441MHz

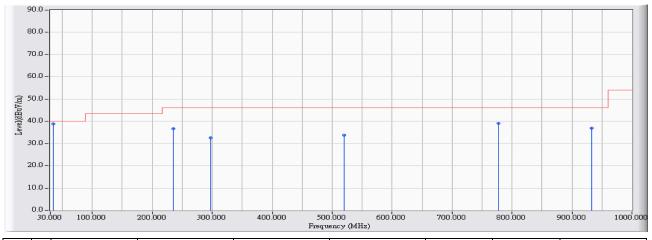


		Frequency	Correct Factor	Reading Level	Measure Level	Margin	Limit	Detector Type
		(MHz)	(dB)	(dBuV)	(dBuV/m)	(dB)	(dBuV/m)	
1	*	40.670	-17.178	56.318	39.140	-0.860	40.000	QUASIPEAK
2		141.550	-21.688	56.981	35.294	-8.206	43.500	QUASIPEAK
3		238.550	-20.923	54.828	33.905	-12.095	46.000	QUASIPEAK
4		296.750	-19.373	52.644	33.271	-12.729	46.000	QUASIPEAK
5		498.510	-14.069	55.163	41.094	-4.906	46.000	QUASIPEAK
6		776.900	-9.835	54.028	44.193	-1.807	46.000	QUASIPEAK

- 1. All Reading Levels are Quasi-Peak value.
- 2. "*", means this data is the worst emission level.
- 3. Measurement Level = Reading Level + Correct Factor



Site : CB4-H	Time : 2017/04/13
Limit : FCC_CLASS_B_03M_QP	Margin: 0
Probe : CB4-H_FCC_EFS_S2_30M-1GHz_1116 -	Power : AC 120V/60Hz
HORIZONTAL	
EUT : UHD551-L	Note : Mode 3: Tx_3DH5_2441MHz

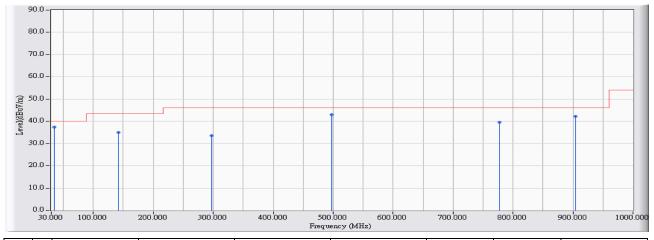


		Frequency	Correct Factor	Reading Level	Measure Level	Margin	Limit	Detector Type
		(MHz)	(dB)	(dBuV)	(dBuV/m)	(dB)	(dBuV/m)	
1	*	34.850	-16.784	55.607	38.823	-1.177	40.000	QUASIPEAK
2		235.155	-21.114	57.740	36.626	-9.374	46.000	QUASIPEAK
3		297.235	-19.379	51.835	32.457	-13.543	46.000	QUASIPEAK
4		519.365	-13.558	47.371	33.813	-12.187	46.000	QUASIPEAK
5		777.385	-9.792	48.957	39.166	-6.834	46.000	QUASIPEAK
6		932.585	-7.993	44.849	36.856	-9.144	46.000	QUASIPEAK

- 1. All Reading Levels are Quasi-Peak value.
- 2. "*", means this data is the worst emission level.
- 3. Measurement Level = Reading Level + Correct Factor



Site : CB4-H	Time : 2017/04/13
Limit : FCC_CLASS_B_03M_QP	Margin: 0
Probe : CB4-H_FCC_EFS_S2_30M-1GHz_1116 -	Power : AC 120V/60Hz
VERTICAL	
EUT : UHD551-L	Note : Mode 3: Tx_3DH5_2441MHz



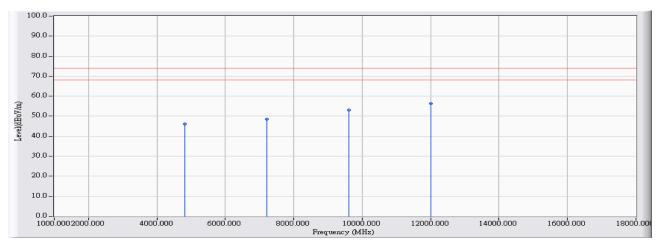
		Frequency	Correct Factor	Reading Level	Measure Level	Margin	Limit	Detector Type
		(MHz)	(dB)	(dBuV)	(dBuV/m)	(dB)	(dBuV/m)	
1	*	34.365	-16.769	54.087	37.318	-2.682	40.000	QUASIPEAK
2		141.550	-21.688	56.767	35.080	-8.420	43.500	QUASIPEAK
3		297.235	-19.379	52.850	33.472	-12.528	46.000	QUASIPEAK
4		497.055	-14.090	56.958	42.868	-3.132	46.000	QUASIPEAK
5		776.900	-9.835	49.499	39.664	-6.336	46.000	QUASIPEAK
6		903.970	-9.235	51.481	42.245	-3.755	46.000	QUASIPEAK

- 1. All Reading Levels are Quasi-Peak value.
- 2. " * ", means this data is the worst emission level.
- 3. Measurement Level = Reading Level + Correct Factor



Harmonic & Spurious:

Site : CB4-H	Time : 2017/04/08
Limit : FCC_SpartC_15.209_03M_PK	Margin : 6
Probe : CB4-H_FCC_EFS_B432_1-18GHz_3M_1116 -	Power : AC 120V/60Hz
HORIZONTAL	
EUT : UHD551-L	Note : Mode 1: Tx_DH5_2402MHz

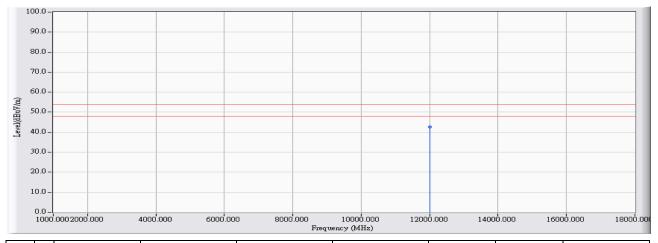


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1		4804.000	7.579	38.590	46.169	-27.831	74.000	PEAK
2		7206.000	16.160	32.420	48.581	-25.419	74.000	PEAK
3		9608.000	21.887	31.090	52.978	-21.022	74.000	PEAK
4	*	12010.000	26.454	29.810	56.263	-17.737	74.000	PEAK

- 1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Peak measurements: RBW = 1MHz, VBW = 1MHz, Sweep: Auto.
- 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
- 4. " * ", means this data is the worst emission level.
- 5. Measurement Level = Reading Level + Correct Factor.
- 6. The average measurement was not performed when the peak measured data under the limit of average detection.
- 7. The Emission above 13GHz were not included is because their levels are too low.



Site : CB4-H	Time : 2017/04/08
Limit : FCC_SpartC_15.209_03M_AV	Margin : 6
Probe : CB4-H_FCC_EFS_B432_1-18GHz_3M_1116 -	Power : AC 120V/60Hz
HORIZONTAL	
EUT : UHD551-L	Note : Mode 1: Tx_DH5_2402MHz

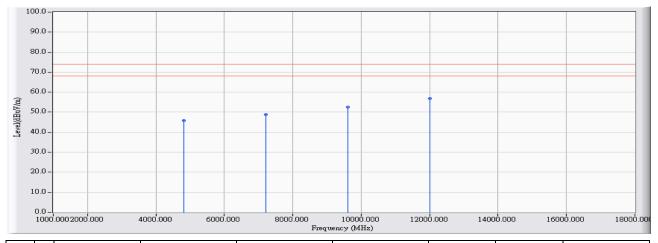


	Frequenc	y Correct Factor	Reading Level	Measure Level	Margin	Limit	Detector Type
	(MHz)	(dB)	(dBuV)	(dBuV/m)	(dB)	(dBuV/m)	
1	* 12010.0	26.454	16.080	42.533	-11.467	54.000	AVERAGE

- 1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Peak measurements: RBW = 1MHz, VBW = 1MHz, Sweep: Auto.
- 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
- 4. " * ", means this data is the worst emission level.
- 5. Measurement Level = Reading Level + Correct Factor.
- 6. The average measurement was not performed when the peak measured data under the limit of average detection.
- 7. The Emission above 13GHz were not included is because their levels are too low.



Site : CB4-H	Time : 2017/04/08
Limit : FCC_SpartC_15.209_03M_PK	Margin : 6
Probe : CB4-H_FCC_EFS_B432_1-18GHz_3M_1116 -	Power : AC 120V/60Hz
VERTICAL	
EUT : UHD551-L	Note : Mode 1: Tx_DH5_2402MHz

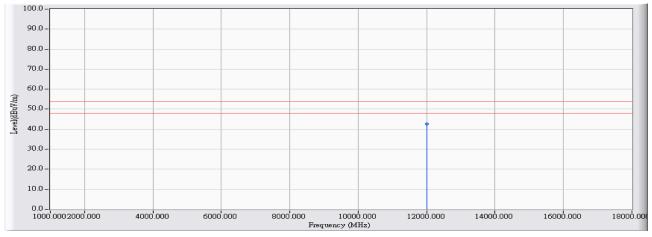


		Frequency	Correct Factor	Reading Level	Measure Level	Margin	Limit	Detector Type
		(MHz)	(dB)	(dBuV)	(dBuV/m)	(dB)	(dBuV/m)	
1		4804.000	7.579	38.220	45.799	-28.201	74.000	PEAK
2		7206.000	16.160	32.730	48.891	-25.109	74.000	PEAK
3		9608.000	21.887	30.650	52.538	-21.462	74.000	PEAK
4	*	12010.000	26.454	30.250	56.703	-17.297	74.000	PEAK

- 1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Peak measurements: RBW = 1MHz, VBW = 1MHz, Sweep: Auto.
- 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
- 4. " * ", means this data is the worst emission level.
- 5. Measurement Level = Reading Level + Correct Factor.
- 6. The average measurement was not performed when the peak measured data under the limit of average detection.
- 7. The Emission above 13GHz were not included is because their levels are too low.



Site : CB4-H	Time : 2017/04/08
Limit : FCC_SpartC_15.209_03M_AV	Margin : 6
Probe : CB4-H_FCC_EFS_B432_1-18GHz_3M_1116 -	Power : AC 120V/60Hz
VERTICAL	
EUT : UHD551-L	Note : Mode 1: Tx_DH5_2402MHz

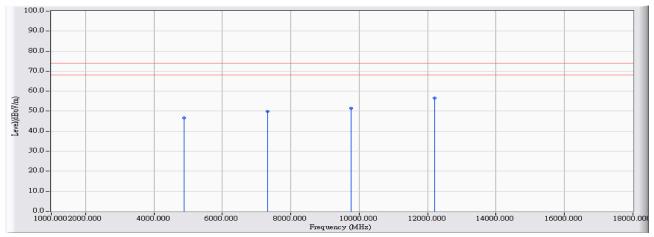


		Frequency	Correct Factor	Reading Level	Measure Level	Margin	Limit	Detector Type
		(MHz)	(dB)	(dBuV)	(dBuV/m)	(dB)	(dBuV/m)	
1	*	12010.000	26.454	16.290	42.743	-11.257	54.000	AVERAGE

- 1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Peak measurements: RBW = 1MHz, VBW = 1MHz, Sweep: Auto.
- 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
- 4. " * ", means this data is the worst emission level.
- 5. Measurement Level = Reading Level + Correct Factor.
- 6. The average measurement was not performed when the peak measured data under the limit of average detection.
- 7. The Emission above 13GHz were not included is because their levels are too low.



Site : CB4-H	Time : 2017/04/08
Limit : FCC_SpartC_15.209_03M_PK	Margin : 6
Probe : CB4-H_FCC_EFS_B432_1-18GHz_3M_1116 -	Power : AC 120V/60Hz
HORIZONTAL	
EUT : UHD551-L	Note : Mode 1: Tx_DH5_2441MHz

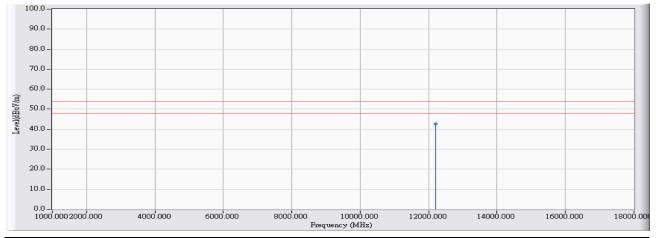


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level	Margin (dB)	Limit (dBuV/m)	Detector Type
1		4882.000	7.849	38.690	46.540	-27.460	74.000	PEAK
2		7323.000	16.729	33.050	49.779	-24.221	74.000	PEAK
3		9764.000	22.245	29.280	51.526	-22.474	74.000	PEAK
4	*	12205.000	26.297	30.250	56.547	-17.453	74.000	PEAK

- 1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Peak measurements: RBW = 1MHz, VBW = 1MHz, Sweep: Auto.
- 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
- 4. " * ", means this data is the worst emission level.
- 5. Measurement Level = Reading Level + Correct Factor.
- 6. The average measurement was not performed when the peak measured data under the limit of average detection.
- 7. The Emission above 13GHz were not included is because their levels are too low.



Site : CB4-H	Time : 2017/04/08
Limit : FCC_SpartC_15.209_03M_AV	Margin : 6
Probe : CB4-H_FCC_EFS_B432_1-18GHz_3M_1116 -	Power : AC 120V/60Hz
HORIZONTAL	
EUT : UHD551-L	Note : Mode 1: Tx_DH5_2441MHz

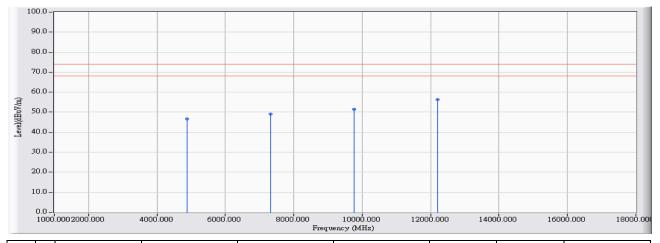


		Frequency	Correct Factor	Reading Level	Measure Level	Margin	Limit	Detector Type
		(MHz)	(dB)	(dBuV)	(dBuV/m)	(dB)	(dBuV/m)	
1	*	12205.000	26.297	16.330	42.627	-11.373	54.000	AVERAGE

- 1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Peak measurements: RBW = 1MHz, VBW = 1MHz, Sweep: Auto.
- 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
- 4. " * ", means this data is the worst emission level.
- 5. Measurement Level = Reading Level + Correct Factor.
- 6. The average measurement was not performed when the peak measured data under the limit of average detection.
- 7. The Emission above 13GHz were not included is because their levels are too low.



Site : CB4-H	Time : 2017/04/08
Limit : FCC_SpartC_15.209_03M_PK	Margin : 6
Probe : CB4-H_FCC_EFS_B432_1-18GHz_3M_1116 -	Power : AC 120V/60Hz
VERTICAL	
EUT : UHD551-L	Note : Mode 1: Tx_DH5_2441MHz

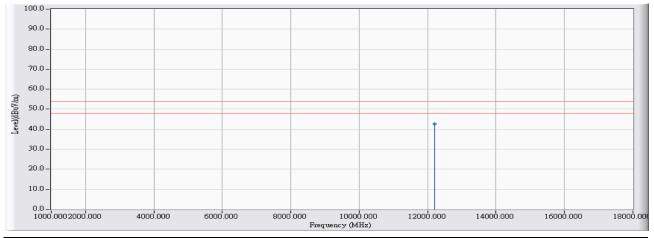


		Frequency	Correct Factor	Reading Level	Measure Level	Margin	Limit	Detector Type
		(MHz)	(dB)	(dBuV)	(dBuV/m)	(dB)	(dBuV/m)	
1		4882.000	7.849	38.790	46.640	-27.360	74.000	PEAK
2		7323.000	16.729	32.360	49.089	-24.911	74.000	PEAK
3		9764.000	22.245	29.310	51.556	-22.444	74.000	PEAK
4	*	12205.000	26.297	29.950	56.247	-17.753	74.000	PEAK

- 1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Peak measurements: RBW = 1MHz, VBW = 1MHz, Sweep: Auto.
- 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
- 4. " * ", means this data is the worst emission level.
- 5. Measurement Level = Reading Level + Correct Factor.
- 6. The average measurement was not performed when the peak measured data under the limit of average detection.
- 7. The Emission above 13GHz were not included is because their levels are too low.



Site : CB4-H	Time : 2017/04/08
Limit : FCC_SpartC_15.209_03M_AV	Margin : 6
Probe : CB4-H_FCC_EFS_B432_1-18GHz_3M_1116 -	Power : AC 120V/60Hz
VERTICAL	
EUT : UHD551-L	Note : Mode 1: Tx_DH5_2441MHz

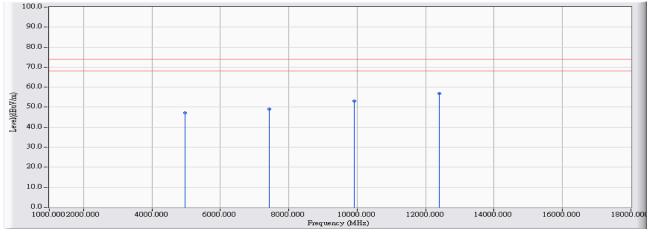


		Frequency	Correct Factor	Reading Level	Measure Level	Margin	Limit	Detector Type
		(MHz)	(dB)	(dBuV)	(dBuV/m)	(dB)	(dBuV/m)	
1	*	12205.000	26.297	16.420	42.717	-11.283	54.000	AVERAGE

- 1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Peak measurements: RBW = 1MHz, VBW = 1MHz, Sweep: Auto.
- 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
- 4. " * ", means this data is the worst emission level.
- 5. Measurement Level = Reading Level + Correct Factor.
- 6. The average measurement was not performed when the peak measured data under the limit of average detection.
- 7. The Emission above 13GHz were not included is because their levels are too low.



Site : CB4-H	Time : 2017/04/08
Limit : FCC_SpartC_15.209_03M_PK	Margin : 6
Probe : CB4-H_FCC_EFS_B432_1-18GHz_3M_1116 -	Power : AC 120V/60Hz
HORIZONTAL	
EUT : UHD551-L	Note : Mode 1: Tx_DH5_2480MHz

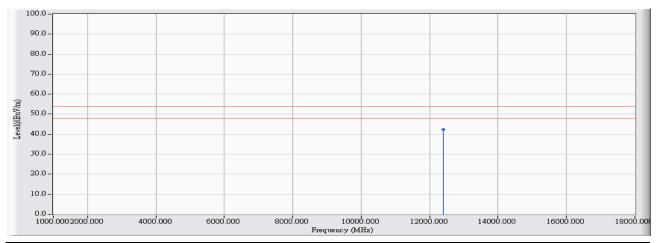


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1		4960.000	8.121	39.040	47.161	-26.839	74.000	PEAK
2		7440.000	17.278	31.700	48.977	-25.023	74.000	PEAK
3		9920.000	22.512	30.460	52.972	-21.028	74.000	PEAK
4	*	12400.000	26.150	30.730	56.880	-17.120	74.000	PEAK

- 1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Peak measurements: RBW = 1MHz, VBW = 1MHz, Sweep: Auto.
- 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
- 4. " * ", means this data is the worst emission level.
- 5. Measurement Level = Reading Level + Correct Factor.
- 6. The average measurement was not performed when the peak measured data under the limit of average detection.
- 7. The Emission above 13GHz were not included is because their levels are too low.



Site : CB4-H	Time : 2017/04/08
Limit : FCC_SpartC_15.209_03M_AV	Margin : 6
Probe : CB4-H_FCC_EFS_B432_1-18GHz_3M_1116 -	Power : AC 120V/60Hz
HORIZONTAL	
EUT : UHD551-L	Note : Mode 1: Tx_DH5_2480MHz

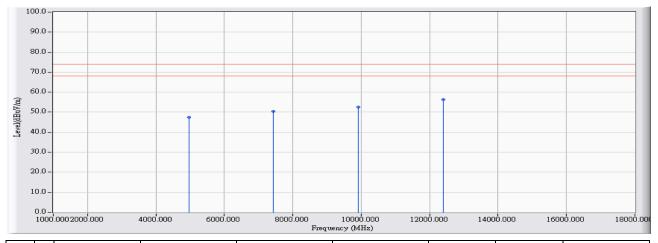


		Frequency (MHz)	Correct Factor	Reading Level	Measure Level	Margin (dB)	Limit (dBuV/m)	Detector Type
1	*	12400.000	26.150	16.260	42.410	-11.590	54.000	AVERAGE

- 1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Peak measurements: RBW = 1MHz, VBW = 1MHz, Sweep: Auto.
- 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
- 4. " * ", means this data is the worst emission level.
- 5. Measurement Level = Reading Level + Correct Factor.
- 6. The average measurement was not performed when the peak measured data under the limit of average detection.
- 7. The Emission above 13GHz were not included is because their levels are too low.



Site : CB4-H	Time : 2017/04/08
Limit : FCC_SpartC_15.209_03M_PK	Margin : 6
Probe : CB4-H_FCC_EFS_B432_1-18GHz_3M_1116 -	Power : AC 120V/60Hz
VERTICAL	
EUT : UHD551-L	Note : Mode 1: Tx_DH5_2480MHz

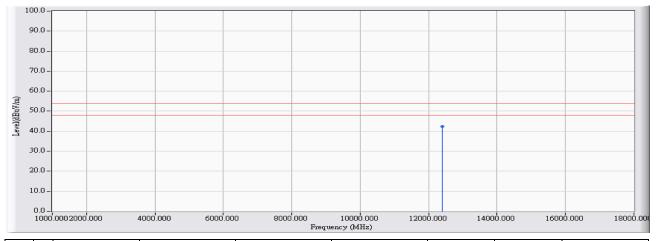


		Frequency	Correct Factor	Reading Level	Measure Level	Margin	Limit	Detector Type
		(MHz)	(dB)	(dBuV)	(dBuV/m)	(dB)	(dBuV/m)	
1		4960.000	8.121	39.300	47.421	-26.579	74.000	PEAK
2		7440.000	17.278	33.240	50.517	-23.483	74.000	PEAK
3		9920.000	22.512	29.980	52.492	-21.508	74.000	PEAK
4	*	12400.000	26.150	30.140	56.290	-17.710	74.000	PEAK

- 1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Peak measurements: RBW = 1MHz, VBW = 1MHz, Sweep: Auto.
- 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
- 4. " * ", means this data is the worst emission level.
- 5. Measurement Level = Reading Level + Correct Factor.
- 6. The average measurement was not performed when the peak measured data under the limit of average detection.
- 7. The Emission above 13GHz were not included is because their levels are too low.



Site : CB4-H	Time : 2017/04/08
Limit : FCC_SpartC_15.209_03M_AV	Margin : 6
Probe : CB4-H_FCC_EFS_B432_1-18GHz_3M_1116 -	Power : AC 120V/60Hz
VERTICAL	
EUT : UHD551-L	Note : Mode 1: Tx_DH5_2480MHz

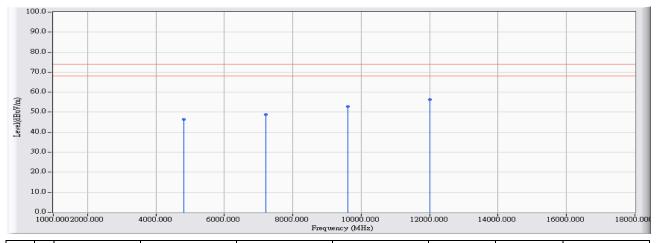


			Frequency (MHz)	Correct Factor	Reading Level	Measure Level	Margin (dB)	Limit (dBuV/m)	Detector Type
	1	*	12400.000	\ \frac{1}{2}	()	\	()	,	AVERAGE
L	ı		12400.000	20.150	10.220	42.370	-11.030	34.000	AVENAGE

- 1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Peak measurements: RBW = 1MHz, VBW = 1MHz, Sweep: Auto.
- 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
- 4. " * ", means this data is the worst emission level.
- 5. Measurement Level = Reading Level + Correct Factor.
- 6. The average measurement was not performed when the peak measured data under the limit of average detection.
- 7. The Emission above 13GHz were not included is because their levels are too low.



Site : CB4-H	Time : 2017/04/08
Limit : FCC_SpartC_15.209_03M_PK	Margin : 6
Probe : CB4-H_FCC_EFS_B432_1-18GHz_3M_1116 -	Power : AC 120V/60Hz
HORIZONTAL	
EUT : UHD551-L	Note : Mode 2: Tx_2DH5_2402MHz

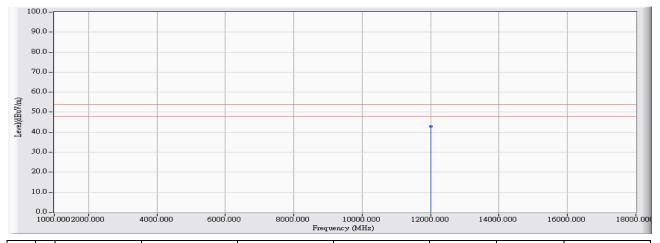


		Frequency	Correct Factor	Reading Level	Measure Level	Margin	Limit	Detector Type
		(MHz)	(dB)	(dBuV)	(dBuV/m)	(dB)	(dBuV/m)	
1		4804.000	7.579	38.670	46.249	-27.751	74.000	PEAK
2		7206.000	16.160	32.520	48.681	-25.319	74.000	PEAK
3		9608.000	21.887	30.940	52.828	-21.172	74.000	PEAK
4	*	12010.000	26.454	29.830	56.283	-17.717	74.000	PEAK

- 1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Peak measurements: RBW = 1MHz, VBW = 1MHz, Sweep: Auto.
- 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
- 4. " * ", means this data is the worst emission level.
- 5. Measurement Level = Reading Level + Correct Factor.
- 6. The average measurement was not performed when the peak measured data under the limit of average detection.
- 7. The Emission above 13GHz were not included is because their levels are too low.



Site : CB4-H	Time : 2017/04/08
Limit : FCC_SpartC_15.209_03M_AV	Margin : 6
Probe : CB4-H_FCC_EFS_B432_1-18GHz_3M_1116 -	Power : AC 120V/60Hz
HORIZONTAL	
EUT : UHD551-L	Note : Mode 2: Tx_2DH5_2402MHz

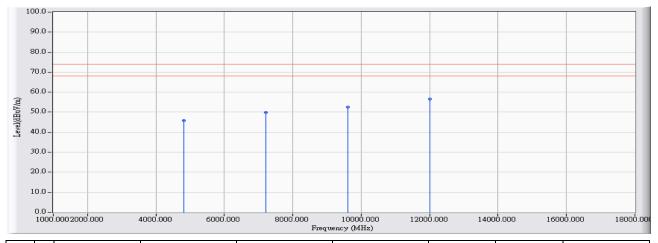


		Frequency	Correct Factor	Reading Level	Measure Level	Margin	Limit	Detector Type
		(MHz)	(dB)	(dBuV)	(dBuV/m)	(dB)	(dBuV/m)	
1	*	12010.000	26.454	16.330	42.783	-11.217	54.000	AVERAGE

- 1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Peak measurements: RBW = 1MHz, VBW = 1MHz, Sweep: Auto.
- 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
- 4. " * ", means this data is the worst emission level.
- 5. Measurement Level = Reading Level + Correct Factor.
- 6. The average measurement was not performed when the peak measured data under the limit of average detection.
- 7. The Emission above 13GHz were not included is because their levels are too low.



Site : CB4-H	Time : 2017/04/08
Limit : FCC_SpartC_15.209_03M_PK	Margin : 6
Probe : CB4-H_FCC_EFS_B432_1-18GHz_3M_1116 -	Power : AC 120V/60Hz
VERTICAL	
EUT : UHD551-L	Note : Mode 2: Tx_2DH5_2402MHz

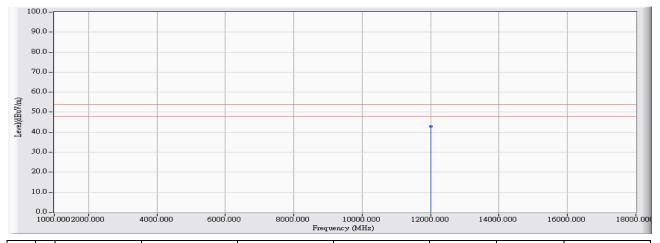


		Frequency	Correct Factor	Reading Level	Measure Level	Margin	Limit	Detector Type
		(MHz)	(dB)	(dBuV)	(dBuV/m)	(dB)	(dBuV/m)	
1		4804.000	7.579	38.190	45.769	-28.231	74.000	PEAK
2		7206.000	16.160	33.690	49.851	-24.149	74.000	PEAK
3		9608.000	21.887	30.640	52.528	-21.472	74.000	PEAK
4	*	12010.000	26.454	30.050	56.503	-17.497	74.000	PEAK

- 1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Peak measurements: RBW = 1MHz, VBW = 1MHz, Sweep: Auto.
- 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
- 4. " * ", means this data is the worst emission level.
- 5. Measurement Level = Reading Level + Correct Factor.
- 6. The average measurement was not performed when the peak measured data under the limit of average detection.
- 7. The Emission above 13GHz were not included is because their levels are too low.



Site : CB4-H	Time : 2017/04/08
Limit : FCC_SpartC_15.209_03M_AV	Margin : 6
Probe : CB4-H_FCC_EFS_B432_1-18GHz_3M_1116 -	Power : AC 120V/60Hz
VERTICAL	
EUT : UHD551-L	Note : Mode 2: Tx_2DH5_2402MHz

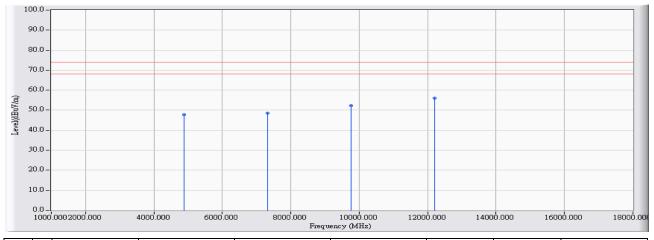


		Frequency	Correct Factor	Reading Level	Measure Level	Margin	Limit	Detector Type
		(MHz)	(dB)	(dBuV)	(dBuV/m)	(dB)	(dBuV/m)	
1	*	12010.000	26.454	16.350	42.803	-11.197	54.000	AVERAGE

- 1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Peak measurements: RBW = 1MHz, VBW = 1MHz, Sweep: Auto.
- 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
- 4. " * ", means this data is the worst emission level.
- 5. Measurement Level = Reading Level + Correct Factor.
- 6. The average measurement was not performed when the peak measured data under the limit of average detection.
- 7. The Emission above 13GHz were not included is because their levels are too low.



Site : CB4-H	Time : 2017/04/08
Limit : FCC_SpartC_15.209_03M_PK	Margin : 6
Probe : CB4-H_FCC_EFS_B432_1-18GHz_3M_1116 -	Power : AC 120V/60Hz
HORIZONTAL	
EUT : UHD551-L	Note : Mode 2: Tx_2DH5_2441MHz

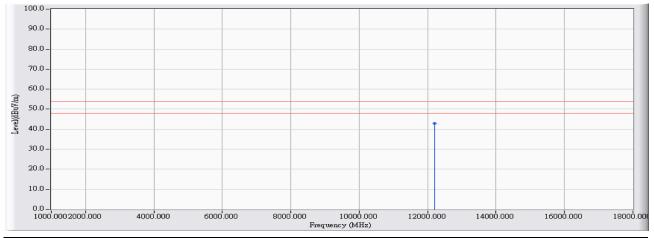


		Frequency	Correct Factor	Reading Level	Measure Level	Margin	Limit	Detector Type
		(MHz)	(dB)	(dBuV)	(dBuV/m)	(dB)	(dBuV/m)	
1		4882.000	7.849	39.740	47.590	-26.410	74.000	PEAK
2		7323.000	16.729	31.880	48.609	-25.391	74.000	PEAK
3		9764.000	22.245	29.950	52.196	-21.804	74.000	PEAK
4	*	12205.000	26.297	29.650	55.947	-18.053	74.000	PEAK

- 1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Peak measurements: RBW = 1MHz, VBW = 1MHz, Sweep: Auto.
- 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
- 4. " * ", means this data is the worst emission level.
- 5. Measurement Level = Reading Level + Correct Factor.
- 6. The average measurement was not performed when the peak measured data under the limit of average detection.
- 7. The Emission above 13GHz were not included is because their levels are too low.



Site : CB4-H	Time : 2017/04/08
Limit : FCC_SpartC_15.209_03M_AV	Margin : 6
Probe : CB4-H_FCC_EFS_B432_1-18GHz_3M_1116 -	Power : AC 120V/60Hz
HORIZONTAL	
EUT : UHD551-L	Note : Mode 2: Tx_2DH5_2441MHz

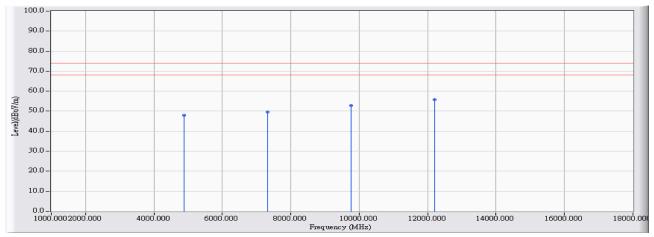


		Frequency	Correct Factor	Reading Level	Measure Level	Margin	Limit	Detector Type
		(MHz)	(dB)	(dBuV)	(dBuV/m)	(dB)	(dBuV/m)	
1	*	12205.000	26.297	16.480	42.777	-11.223	54.000	AVERAGE

- 1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Peak measurements: RBW = 1MHz, VBW = 1MHz, Sweep: Auto.
- 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
- 4. " * ", means this data is the worst emission level.
- 5. Measurement Level = Reading Level + Correct Factor.
- 6. The average measurement was not performed when the peak measured data under the limit of average detection.
- 7. The Emission above 13GHz were not included is because their levels are too low.



Site : CB4-H	Time : 2017/04/08
Limit : FCC_SpartC_15.209_03M_PK	Margin : 6
Probe : CB4-H_FCC_EFS_B432_1-18GHz_3M_1116 -	Power : AC 120V/60Hz
VERTICAL	
EUT : UHD551-L	Note : Mode 2: Tx_2DH5_2441MHz

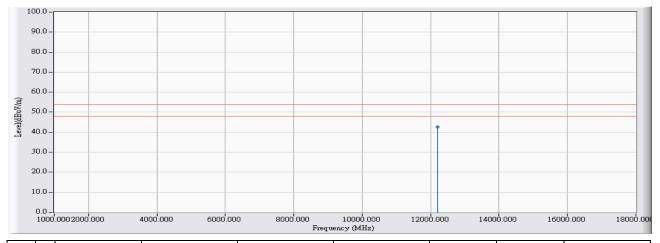


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1		4882.000	7.849	40.050	47.900	-26.100	74.000	PEAK
2		7323.000	16.729	32.950	49.679	-24.321	74.000	PEAK
3		9764.000	22.245	30.570	52.816	-21.184	74.000	PEAK
4	*	12205.000	26.297	29.420	55.717	-18.283	74.000	PEAK

- 1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Peak measurements: RBW = 1MHz, VBW = 1MHz, Sweep: Auto.
- 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
- 4. " * ", means this data is the worst emission level.
- 5. Measurement Level = Reading Level + Correct Factor.
- 6. The average measurement was not performed when the peak measured data under the limit of average detection.
- 7. The Emission above 13GHz were not included is because their levels are too low.



Site : CB4-H	Time : 2017/04/08
Limit : FCC_SpartC_15.209_03M_AV	Margin : 6
Probe : CB4-H_FCC_EFS_B432_1-18GHz_3M_1116 -	Power : AC 120V/60Hz
VERTICAL	
EUT : UHD551-L	Note : Mode 2: Tx_2DH5_2441MHz

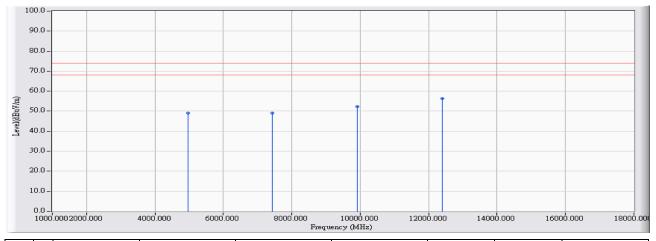


			Frequency	Correct Factor	Reading Level	Measure Level	Margin	Limit	Detector Type
L			(MHz)	(dB)	(dBuV)	(dBuV/m)	(dB)	(dBuV/m)	
	1	*	12205.000	26.297	16.440	42.737	-11.263	54.000	AVERAGE

- 1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Peak measurements: RBW = 1MHz, VBW = 1MHz, Sweep: Auto.
- 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
- 4. " * ", means this data is the worst emission level.
- 5. Measurement Level = Reading Level + Correct Factor.
- 6. The average measurement was not performed when the peak measured data under the limit of average detection.
- 7. The Emission above 13GHz were not included is because their levels are too low.



Site : CB4-H	Time : 2017/04/08
Limit : FCC_SpartC_15.209_03M_PK	Margin : 6
Probe : CB4-H_FCC_EFS_B432_1-18GHz_3M_1116 -	Power : AC 120V/60Hz
HORIZONTAL	
EUT : UHD551-L	Note : Mode 2: Tx_2DH5_2480MHz

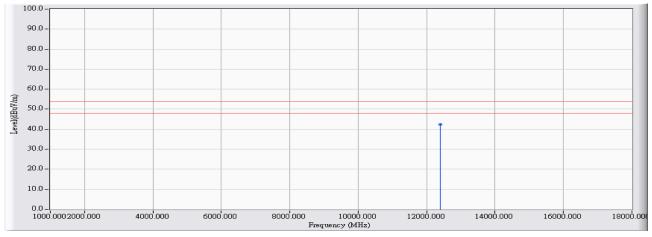


		Frequency	Correct Factor	Reading Level	Measure Level	Margin	Limit	Detector Type
		(MHz)	(dB)	(dBuV)	(dBuV/m)	(dB)	(dBuV/m)	
1		4960.000	8.121	41.060	49.181	-24.819	74.000	PEAK
2		7440.000	17.278	31.800	49.077	-24.923	74.000	PEAK
3		9920.000	22.512	29.660	52.172	-21.828	74.000	PEAK
4	*	12400.000	26.150	30.030	56.180	-17.820	74.000	PEAK

- 1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Peak measurements: RBW = 1MHz, VBW = 1MHz, Sweep: Auto.
- 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
- 4. " * ", means this data is the worst emission level.
- 5. Measurement Level = Reading Level + Correct Factor.
- 6. The average measurement was not performed when the peak measured data under the limit of average detection.
- 7. The Emission above 13GHz were not included is because their levels are too low.



Site : CB4-H	Time : 2017/04/08
Limit : FCC_SpartC_15.209_03M_AV	Margin : 6
Probe : CB4-H_FCC_EFS_B432_1-18GHz_3M_1116 -	Power : AC 120V/60Hz
HORIZONTAL	
EUT : UHD551-L	Note : Mode 2: Tx_2DH5_2480MHz

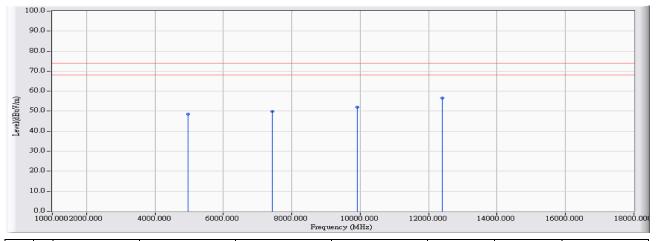


		Frequency	Correct Factor	Reading Level	Measure Level	Margin	Limit	Detector Type
		(MHz)	(dB)	(dBuV)	(dBuV/m)	(dB)	(dBuV/m)	
1	*	12400.000	26.150	16.290	42.440	-11.560	54.000	AVERAGE

- 1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Peak measurements: RBW = 1MHz, VBW = 1MHz, Sweep: Auto.
- 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
- 4. " * ", means this data is the worst emission level.
- 5. Measurement Level = Reading Level + Correct Factor.
- 6. The average measurement was not performed when the peak measured data under the limit of average detection.
- 7. The Emission above 13GHz were not included is because their levels are too low.



Site : CB4-H	Time : 2017/04/08
Limit : FCC_SpartC_15.209_03M_PK	Margin : 6
Probe : CB4-H_FCC_EFS_B432_1-18GHz_3M_1116 -	Power : AC 120V/60Hz
VERTICAL	
EUT : UHD551-L	Note : Mode 2: Tx_2DH5_2480MHz

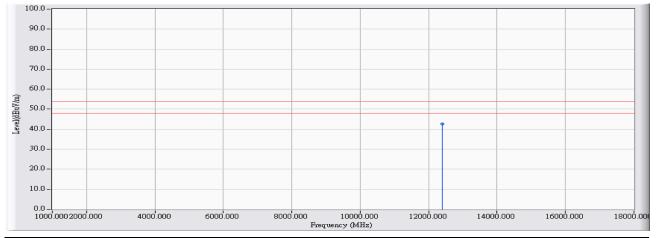


		Frequency	Correct Factor	Reading Level	Measure Level	Margin	Limit	Detector Type
		(MHz)	(dB)	(dBuV)	(dBuV/m)	(dB)	(dBuV/m)	
1		4960.000	8.121	40.400	48.521	-25.479	74.000	PEAK
2		7440.000	17.278	32.640	49.917	-24.083	74.000	PEAK
3		9920.000	22.512	29.560	52.072	-21.928	74.000	PEAK
4	*	12400.000	26.150	30.480	56.630	-17.370	74.000	PEAK

- 1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Peak measurements: RBW = 1MHz, VBW = 1MHz, Sweep: Auto.
- 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
- 4. " * ", means this data is the worst emission level.
- 5. Measurement Level = Reading Level + Correct Factor.
- 6. The average measurement was not performed when the peak measured data under the limit of average detection.
- 7. The Emission above 13GHz were not included is because their levels are too low.



Site : CB4-H	Time : 2017/04/08
Limit : FCC_SpartC_15.209_03M_AV	Margin : 6
Probe : CB4-H_FCC_EFS_B432_1-18GHz_3M_1116 -	Power : AC 120V/60Hz
VERTICAL	
EUT : UHD551-L	Note : Mode 2: Tx_2DH5_2480MHz

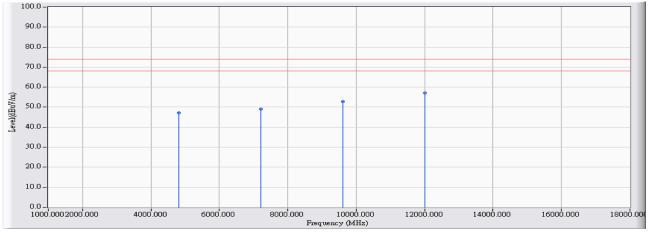


		Frequency	Correct Factor	Reading Level	Measure Level	Margin	Limit	Detector Type
		(MHz)	(dB)	(dBuV)	(dBuV/m)	(dB)	(dBuV/m)	
1	*	12400.000	26.150	16.480	42.630	-11.370	54.000	AVERAGE

- 1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Peak measurements: RBW = 1MHz, VBW = 1MHz, Sweep: Auto.
- 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
- 4. " * ", means this data is the worst emission level.
- 5. Measurement Level = Reading Level + Correct Factor.
- 6. The average measurement was not performed when the peak measured data under the limit of average detection.
- 7. The Emission above 13GHz were not included is because their levels are too low.



Site : CB4-H	Time : 2017/04/08
Limit : FCC_SpartC_15.209_03M_PK	Margin: 6
Probe : CB4-H_FCC_EFS_B432_1-18GHz_3M_1116 -	Power : AC 120V/60Hz
HORIZONTAL	
EUT : UHD551-L	Note: Mode 3: Tx_3DH5_2402MHz

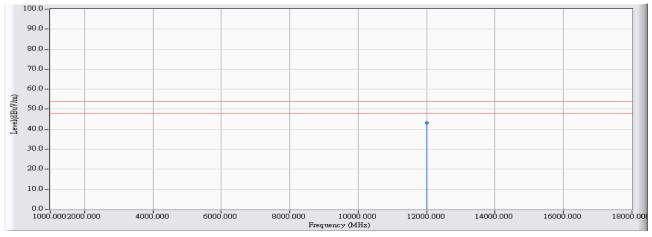


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1		4804.000	7.579	39.670	47.249	-26.751	74.000	PEAK
2		7206.000	16.160	32.860	49.021	-24.979	74.000	PEAK
3		9608.000	21.887	30.870	52.758	-21.242	74.000	PEAK
4	*	12010.000	26.454	30.690	57.143	-16.857	74.000	PEAK

- 1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Peak measurements: RBW = 1MHz, VBW = 1MHz, Sweep: Auto.
- 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
- 4. " * ", means this data is the worst emission level.
- 5. Measurement Level = Reading Level + Correct Factor.
- 6. The average measurement was not performed when the peak measured data under the limit of average detection.
- 7. The Emission above 13GHz were not included is because their levels are too low.



Site : CB4-H	Time : 2017/04/08
Limit : FCC_SpartC_15.209_03M_AV	Margin : 6
Probe : CB4-H_FCC_EFS_B432_1-18GHz_3M_1116 -	Power : AC 120V/60Hz
HORIZONTAL	
EUT : UHD551-L	Note : Mode 3: Tx_3DH5_2402MHz

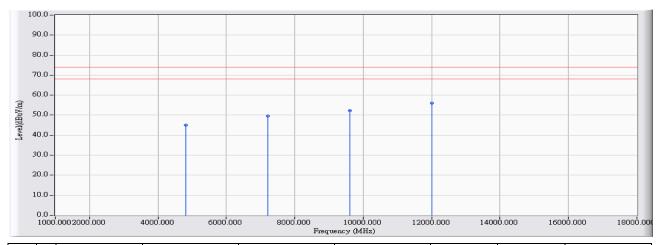


		Frequency	Correct Factor	Reading Level	Measure Level	Margin	Limit	Detector Type
		(MHz)	(dB)	(dBuV)	(dBuV/m)	(dB)	(dBuV/m)	
1	*	12010.000	26.454	16.690	43.143	-10.857	54.000	AVERAGE

- 1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Peak measurements: RBW = 1MHz, VBW = 1MHz, Sweep: Auto.
- 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
- 4. " * ", means this data is the worst emission level.
- 5. Measurement Level = Reading Level + Correct Factor.
- 6. The average measurement was not performed when the peak measured data under the limit of average detection.
- 7. The Emission above 13GHz were not included is because their levels are too low.



Site : CB4-H	Time : 2017/04/08
Limit : FCC_SpartC_15.209_03M_PK	Margin: 6
Probe : CB4-H_FCC_EFS_B432_1-18GHz_3M_1116 -	Power : AC 120V/60Hz
VERTICAL	
EUT : UHD551-L	Note: Mode 3: Tx_3DH5_2402MHz

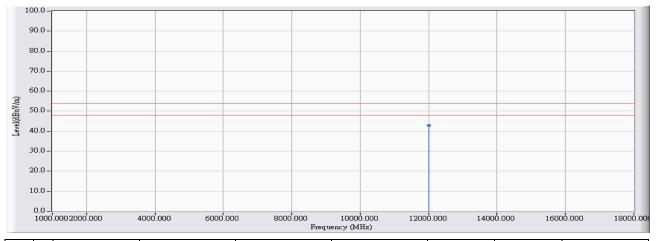


		Frequency	Correct Factor	Reading Level	Measure Level	Margin	Limit	Detector Type
		(MHz)	(dB)	(dBuV)	(dBuV/m)	(dB)	(dBuV/m)	
1		4804.000	7.579	37.530	45.109	-28.891	74.000	PEAK
2		7206.000	16.160	33.380	49.541	-24.459	74.000	PEAK
3		9608.000	21.887	30.390	52.278	-21.722	74.000	PEAK
4	*	12010.000	26.454	29.620	56.073	-17.927	74.000	PEAK

- 1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Peak measurements: RBW = 1MHz, VBW = 1MHz, Sweep: Auto.
- 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
- 4. " * ", means this data is the worst emission level.
- 5. Measurement Level = Reading Level + Correct Factor.
- 6. The average measurement was not performed when the peak measured data under the limit of average detection.
- 7. The Emission above 13GHz were not included is because their levels are too low.



Site : CB4-H	Time : 2017/04/08
Limit : FCC_SpartC_15.209_03M_AV	Margin : 6
Probe : CB4-H_FCC_EFS_B432_1-18GHz_3M_1116 -	Power : AC 120V/60Hz
VERTICAL	
EUT : UHD551-L	Note : Mode 3: Tx_3DH5_2402MHz

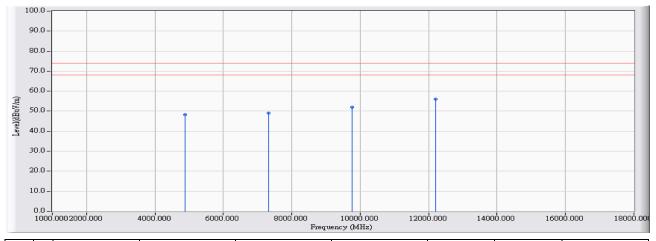


		Frequency	Correct Factor	Reading Level	Measure Level	Margin		Detector Type
		(MHz)	(dB)	(dBuV)	(dBuV/m)	(dB)	(dBuV/m)	
1	*	12010.000	26.454	16.390	42.843	-11.157	54.000	AVERAGE

- 1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Peak measurements: RBW = 1MHz, VBW = 1MHz, Sweep: Auto.
- 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
- 4. " * ", means this data is the worst emission level.
- 5. Measurement Level = Reading Level + Correct Factor.
- 6. The average measurement was not performed when the peak measured data under the limit of average detection.
- 7. The Emission above 13GHz were not included is because their levels are too low.



Site : CB4-H	Time : 2017/04/08
Limit : FCC_SpartC_15.209_03M_PK	Margin : 6
Probe : CB4-H_FCC_EFS_B432_1-18GHz_3M_1116 -	Power : AC 120V/60Hz
HORIZONTAL	
EUT : UHD551-L	Note: Mode 3: Tx_3DH5_2441MHz

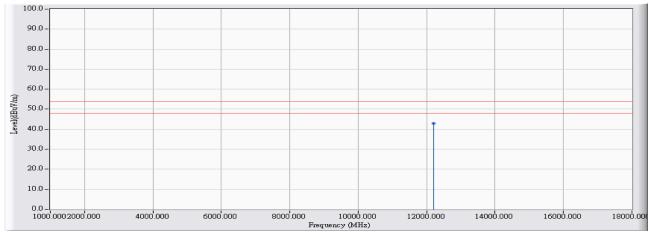


		Frequency	Correct Factor	Reading Level	Measure Level	Margin	Limit	Detector Type
		(MHz)	(dB)	(dBuV)	(dBuV/m)	(dB)	(dBuV/m)	
1		4882.000	7.849	40.350	48.200	-25.800	74.000	PEAK
2		7323.000	16.729	32.280	49.009	-24.991	74.000	PEAK
3		9764.000	22.245	29.640	51.886	-22.114	74.000	PEAK
4	*	12205.000	26.297	29.640	55.937	-18.063	74.000	PEAK

- 1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Peak measurements: RBW = 1MHz, VBW = 1MHz, Sweep: Auto.
- 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
- 4. " * ", means this data is the worst emission level.
- 5. Measurement Level = Reading Level + Correct Factor.
- 6. The average measurement was not performed when the peak measured data under the limit of average detection.
- 7. The Emission above 13GHz were not included is because their levels are too low.



Site : CB4-H	Time : 2017/04/08
Limit : FCC_SpartC_15.209_03M_AV	Margin : 6
Probe : CB4-H_FCC_EFS_B432_1-18GHz_3M_1116 -	Power : AC 120V/60Hz
HORIZONTAL	
EUT : UHD551-L	Note : Mode 3: Tx_3DH5_2441MHz

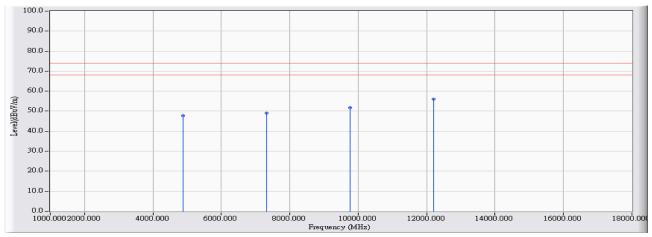


		Frequency	Correct Factor	Reading Level	Measure Level	Margin	Limit	Detector Type
		(MHz)	(dB)	(dBuV)	(dBuV/m)	(dB)	(dBuV/m)	
1	*	12205.000	26.297	16.560	42.857	-11.143	54.000	AVERAGE

- 1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Peak measurements: RBW = 1MHz, VBW = 1MHz, Sweep: Auto.
- 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
- 4. " * ", means this data is the worst emission level.
- 5. Measurement Level = Reading Level + Correct Factor.
- 6. The average measurement was not performed when the peak measured data under the limit of average detection.
- 7. The Emission above 13GHz were not included is because their levels are too low.



Site : CB4-H	Time : 2017/04/08
Limit : FCC_SpartC_15.209_03M_PK	Margin: 6
Probe : CB4-H_FCC_EFS_B432_1-18GHz_3M_1116 -	Power : AC 120V/60Hz
VERTICAL	
EUT : UHD551-L	Note: Mode 3: Tx_3DH5_2441MHz

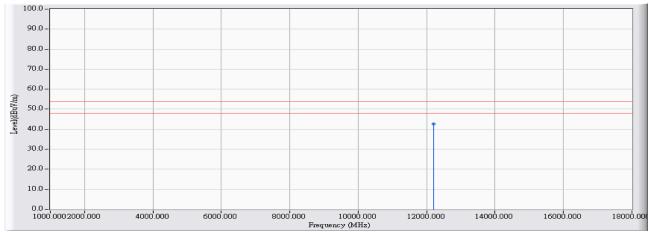


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1		4882.000	7.849	39.750	47.600	-26.400	74.000	PEAK
2		7323.000	16.729	32.300	49.029	-24.971	74.000	PEAK
3		9764.000	22.245	29.440	51.686	-22.314	74.000	PEAK
4	*	12205.000	26.297	29.620	55.917	-18.083	74.000	PEAK

- 1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Peak measurements: RBW = 1MHz, VBW = 1MHz, Sweep: Auto.
- 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
- 4. " * ", means this data is the worst emission level.
- 5. Measurement Level = Reading Level + Correct Factor.
- 6. The average measurement was not performed when the peak measured data under the limit of average detection.
- 7. The Emission above 13GHz were not included is because their levels are too low.



Site : CB4-H	Time : 2017/04/08
Limit : FCC_SpartC_15.209_03M_AV	Margin : 6
Probe : CB4-H_FCC_EFS_B432_1-18GHz_3M_1116 -	Power : AC 120V/60Hz
VERTICAL	
EUT : UHD551-L	Note : Mode 3: Tx_3DH5_2441MHz

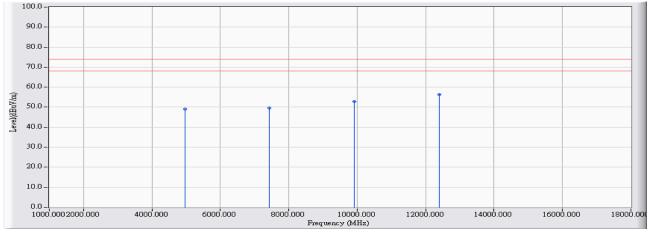


		Frequency	Correct Factor	Reading Level	Measure Level	Margin	Limit	Detector Type
		(MHz)	(dB)	(dBuV)	(dBuV/m)	(dB)	(dBuV/m)	
1	*	12205.000	26.297	16.420	42.717	-11.283	54.000	AVERAGE

- 1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Peak measurements: RBW = 1MHz, VBW = 1MHz, Sweep: Auto.
- 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
- 4. " * ", means this data is the worst emission level.
- 5. Measurement Level = Reading Level + Correct Factor.
- 6. The average measurement was not performed when the peak measured data under the limit of average detection.
- 7. The Emission above 13GHz were not included is because their levels are too low.



Site : CB4-H	Time : 2017/04/08
Limit : FCC_SpartC_15.209_03M_PK	Margin: 6
Probe : CB4-H_FCC_EFS_B432_1-18GHz_3M_1116 -	Power : AC 120V/60Hz
HORIZONTAL	
EUT : UHD551-L	Note: Mode 3: Tx_3DH5_2480MHz

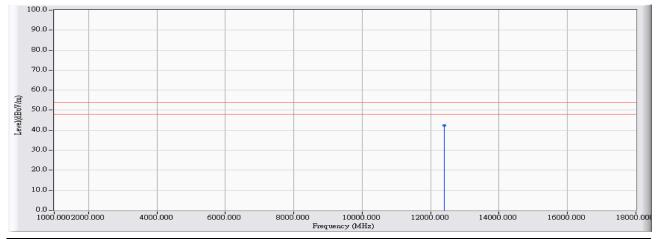


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1		4960.000	8.121	40.970	49.091	-24.909	74.000	PEAK
2		7440.000	17.278	32.340	49.617	-24.383	74.000	PEAK
3		9920.000	22.512	30.260	52.772	-21.228	74.000	PEAK
4	*	12400.000	26.150	30.210	56.360	-17.640	74.000	PEAK

- 1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Peak measurements: RBW = 1MHz, VBW = 1MHz, Sweep: Auto.
- 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
- 4. " * ", means this data is the worst emission level.
- 5. Measurement Level = Reading Level + Correct Factor.
- 6. The average measurement was not performed when the peak measured data under the limit of average detection.
- 7. The Emission above 13GHz were not included is because their levels are too low.



Site : CB4-H	Time : 2017/04/08
Limit : FCC_SpartC_15.209_03M_AV	Margin : 6
Probe : CB4-H_FCC_EFS_B432_1-18GHz_3M_1116 -	Power : AC 120V/60Hz
HORIZONTAL	
EUT : UHD551-L	Note : Mode 3: Tx_3DH5_2480MHz

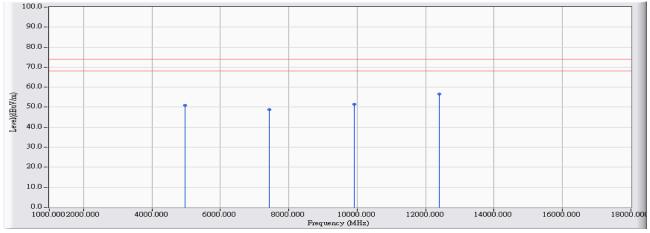


	Frequency	Correct Factor	Reading Level	Measure Level	Margin	Limit	Detector Type
	(MHz)	(dB)	(dBuV)	(dBuV/m)	(dB)	(dBuV/m)	
1 *	12400.000	26.150	16.270	42.420	-11.580	54.000	AVERAGE

- 1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Peak measurements: RBW = 1MHz, VBW = 1MHz, Sweep: Auto.
- 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
- 4. " * ", means this data is the worst emission level.
- 5. Measurement Level = Reading Level + Correct Factor.
- 6. The average measurement was not performed when the peak measured data under the limit of average detection.
- 7. The Emission above 13GHz were not included is because their levels are too low.



Site : CB4-H	Time : 2017/04/08
Limit : FCC_SpartC_15.209_03M_PK	Margin: 6
Probe : CB4-H_FCC_EFS_B432_1-18GHz_3M_1116 -	Power : AC 120V/60Hz
VERTICAL	
EUT : UHD551-L	Note: Mode 3: Tx_3DH5_2480MHz

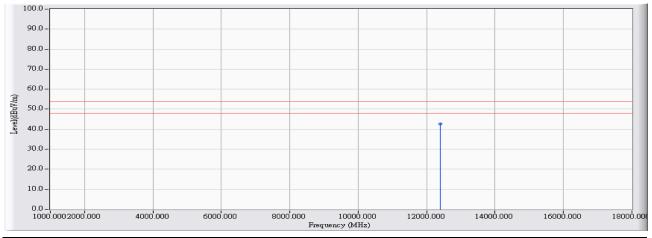


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1		4960.000	8.121	42.730	50.851	-23.149	74.000	PEAK
2		7440.000	17.278	31.600	48.877	-25.123	74.000	PEAK
3		9920.000	22.512	29.030	51.542	-22.458	74.000	PEAK
4	*	12400.000	26.150	30.490	56.640	-17.360	74.000	PEAK

- 1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Peak measurements: RBW = 1MHz, VBW = 1MHz, Sweep: Auto.
- 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
- 4. " * ", means this data is the worst emission level.
- 5. Measurement Level = Reading Level + Correct Factor.
- 6. The average measurement was not performed when the peak measured data under the limit of average detection.
- 7. The Emission above 13GHz were not included is because their levels are too low.



Site : CB4-H	Time : 2017/04/08
Limit : FCC_SpartC_15.209_03M_AV	Margin : 6
Probe : CB4-H_FCC_EFS_B432_1-18GHz_3M_1116 -	Power : AC 120V/60Hz
VERTICAL	
EUT : UHD551-L	Note: Mode 3: Tx_3DH5_2480MHz



		Frequency	Correct Factor	Reading Level	Measure Level	Margin	Limit	Detector Type
		(MHz)	(dB)	(dBuV)	(dBuV/m)	(dB)	(dBuV/m)	
1	*	12400.000	26.150	16.490	42.640	-11.360	54.000	AVERAGE

- 1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Peak measurements: RBW = 1MHz, VBW = 1MHz, Sweep: Auto.
- 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
- 4. " * ", means this data is the worst emission level.
- 5. Measurement Level = Reading Level + Correct Factor.
- 6. The average measurement was not performed when the peak measured data under the limit of average detection.
- 7. The Emission above 13GHz were not included is because their levels are too low.

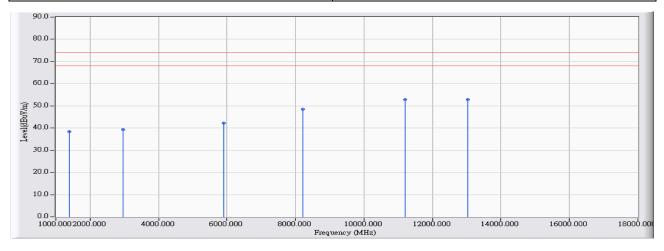


4.7. Test Result for Co-location

Section 15.247 Subclause (d). Emission limitations radiated (Transmitter)

The test was performed with the equipment transmitting first in only 2.4 GHz BT mode and repeated with the 5 GHz WiFi radio transmitting simultaneously to check the impact of the co-location of both radio interfaces. The results and plots below show the worst results obtained in both modes.

Site : CB4-H	Time : 2017/05/04 - 10:41
Limit : FCC_SpartC_15.209_03M_PK	Margin : 6
Probe : CB4_FCC_EFS_B432_1-18GHz_3M_1116 -	Power : AC 120V/60Hz
HORIZONTAL	
EUT: UHD551-L	Note : BT + WiFi 5G _co-location mode



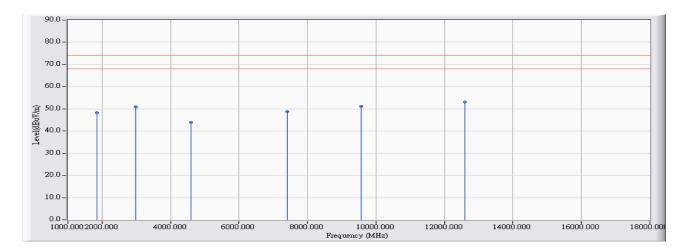
		Frequency	Correct Factor	Reading Level	Measure Level	Margin	Limit	Detector Type
		(MHz)	(dB)	(dBuV)	(dBuV/m)	(dB)	(dBuV/m)	
1		1382.500	-4.317	42.586	38.269	-35.731	74.000	PEAK
2		2963.500	1.684	37.537	39.221	-34.779	74.000	PEAK
3		5913.000	9.878	32.240	42.119	-31.881	74.000	PEAK
4		8208.000	16.916	31.554	48.470	-25.530	74.000	PEAK
5		11191.500	25.381	27.397	52.778	-21.222	74.000	PEAK
6	*	13036.000	25.597	27.242	52.839	-21.161	74.000	PEAK

Note: 1. All readings above 1GHz are performed with peak and/or average measurements as necessary.

- 2. Peak measurements: RBW = 1MHz, VBW = 1MHz, Sweep: Auto.
- 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
- 4. "*", means this data is the worst emission level.
- 5. Measurement Level = Reading Level + Correct Factor.
- 6. The average measurement was not performed when the peak measured data under the limit of average detection.
- 7. The Emission above 13GHz were not included is because their levels are too low.



Site : CB4-H	Time : 2017/05/04 - 10:43		
Limit : FCC_SpartC_15.209_03M_PK	Margin : 6		
Probe : CB4_FCC_EFS_B432_1-18GHz_3M_1116 -	Power : AC 120V/60Hz		
VERTICAL			
EUT : UHD551-L	Note : BT + WiFi 5G _co-location mode		



		Frequency	Correct Factor	Reading Level	Measure Level	Margin	Limit	Detector Type
		(MHz)	(dB)	(dBuV)	(dBuV/m)	(dB)	(dBuV/m)	
1		1858.500	-2.517	50.857	48.341	-25.659	74.000	PEAK
2		2980.500	1.750	49.213	50.963	-23.037	74.000	PEAK
3		4587.000	6.861	37.012	43.873	-30.127	74.000	PEAK
4		7417.500	16.851	31.784	48.634	-25.366	74.000	PEAK
5		9559.500	21.595	29.475	51.069	-22.931	74.000	PEAK
6	*	12585.500	25.343	27.634	52.977	-21.023	74.000	PEAK

Note: 1. All readings above 1GHz are performed with peak and/or average measurements as necessary.

- 2. Peak measurements: RBW = 1MHz, VBW = 1MHz, Sweep: Auto.
- 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
- 4. " * ", means this data is the worst emission level.
- 5. Measurement Level = Reading Level + Correct Factor.
- 6. The average measurement was not performed when the peak measured data under the limit of average detection.
- 7. The Emission above 13GHz were not included is because their levels are too low.



5. RF antenna conducted test

5.1. Test Equipment

The following test equipment is used during the test:

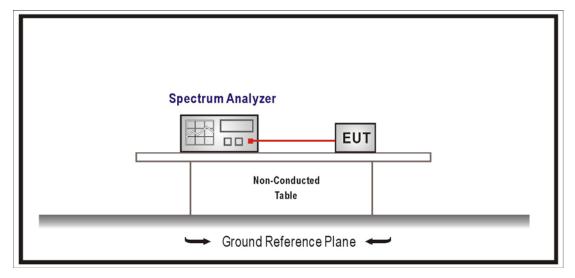
RF antenna conducted test / SR10-H

Instrument	Manufacturer	Model No.	Serial No	Next Cal. Date
Spectrum Analyzer	Agilent	N9010A	US47140172	2017/08/08

Note: All equipments that need to calibrate are with calibration period of 1 year.

5.2. Test Setup

RF Conducted Measurement:



Report No: 1740037R-RFUSP27V00



5.3. Limits

In any 100 kHz bandwidth outside the frequency band in which the spread spectrum intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power, based on an RF conducted or radiated measurement. Attenuation below the general limits specified in Section 15.209(a) is not required. In addition, radiated emissions which fall in the restricted bands, as defined in Section 15.205(a), must also comply with the radiated emission limits specified in Section 15.209(a) (see Section 15.205(c)).

5.4. Test Procedure

The EUT was setup according to ANSI C63.10:2013 and tested according to FHSS test procedure of FCC Public Notice DA 00-705 for compliance to FCC 47CFR 15.247 requirements

Set RBW = 100 kHz, Set VBW> RBW, scan up through 10th harmonic.

5.5. Test Specification

According to FCC Part 15 Subpart C Paragraph 15.247: 2015

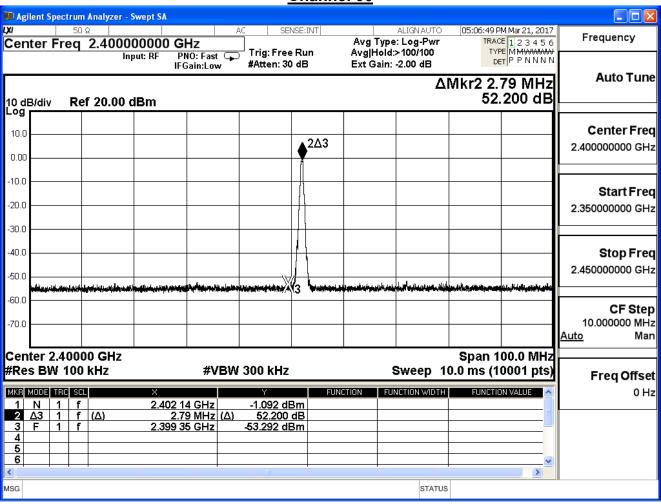


5.6. Test Result

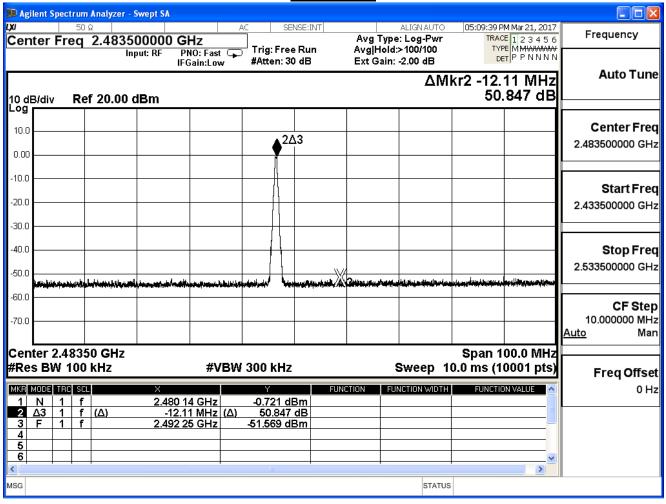
Product	UHD551-L			
Test Item	RF antenna conducted test			
Test Mode	Mode 1: Tx_DH5			
Date of Test	2017/03/21	Test Site	SR10-H	

GFSK

Channel	Frequency	Measure Level	Limit	Result
	(MHz)	(dBc)	(dBc)	
00	2402	52.200	≥20	Pass
78	2480	50.847	≥20	Pass





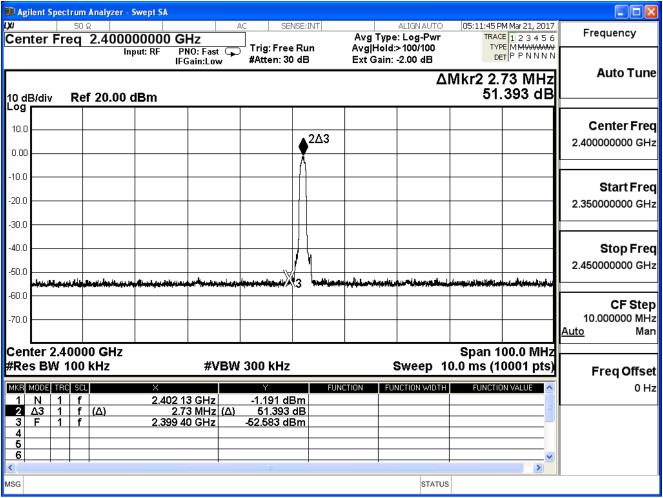




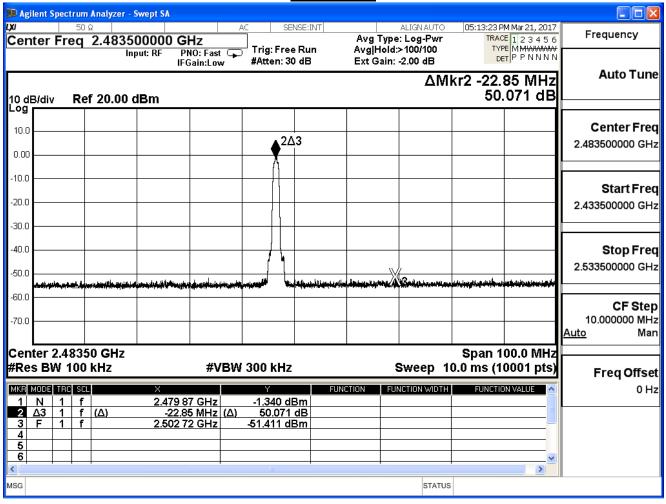
Product	UHD551-L		
Test Item	RF antenna conducted test		
Test Mode	Mode 2: Tx_2DH5		
Date of Test	2017/03/21	Test Site	SR10-H

π/4-DQPSK

Channel	Frequency	Measure Level	Limit	Result
	(MHz)	(dBc)	(dBc)	
00	2402	51.393	≥20	Pass
78	2480	50.071	≧20	Pass





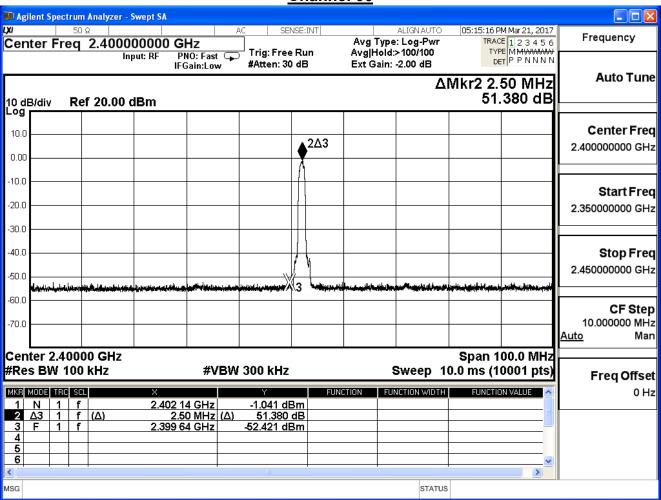




Product	UHD551-L		
Test Item	RF antenna conducted test		
Test Mode	Mode 3: Tx_3DH5		
Date of Test	2017/03/21	Test Site	SR10-H

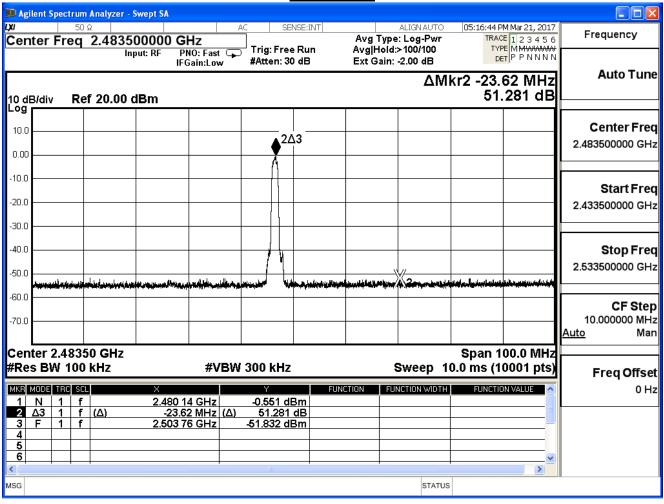
8-DPSK

Channel	Frequency	Measure Level	Limit	Result
	(MHz)	(dBc)	(dBc)	
00	2402	51.380	≥20	Pass
78	2480	51.281	≥20	Pass





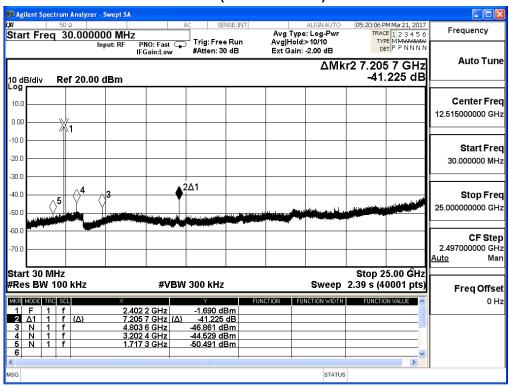
Channel 78



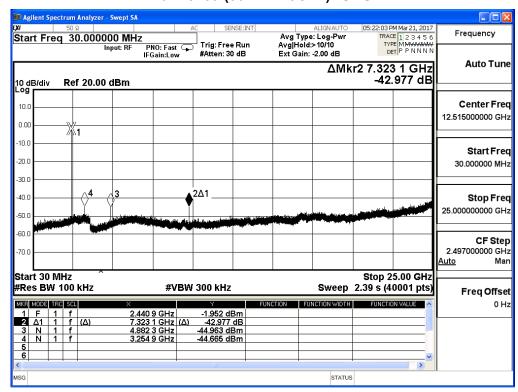


Product	UHD551-L				
Test Item	RF antenna conducted test				
Test Mode	Mode 1: Tx_DH5				
Date of Test	2017/03/21	Test Site	SR10-H		

Channel 00 (30MHz-25GHz)- GFSK

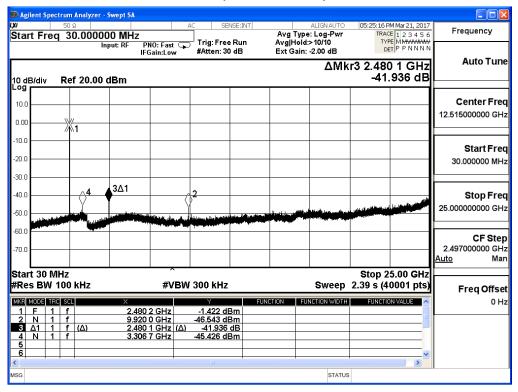


Channel 39 (30MHz-25GHz)- GFSK





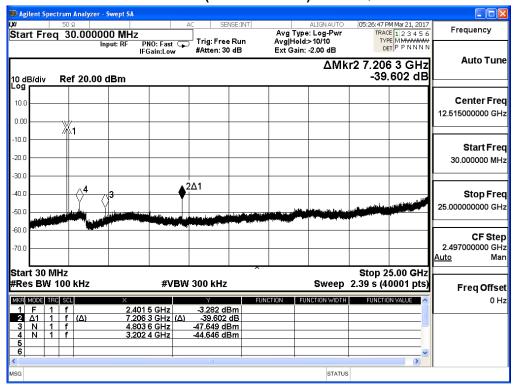
Channel 78 (30MHz-25GHz)- GFSK



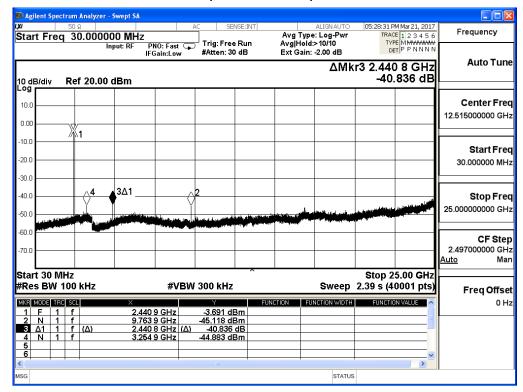


Product	UHD551-L				
Test Item	RF antenna conducted test				
Test Mode	Mode 2: Tx_2DH5				
Date of Test	2017/03/21	Test Site	SR10-H		

Channel 00 (30MHz-25GHz)- π/4-DQPSK

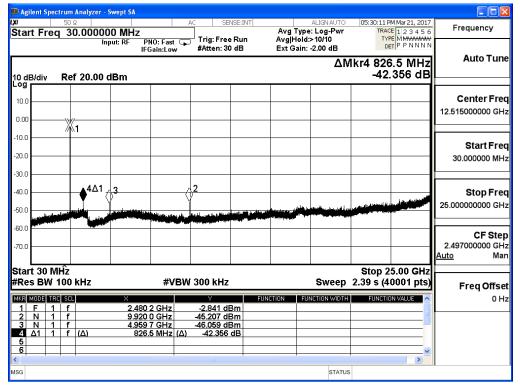


Channel 39 (30MHz-25GHz)- π/4-DQPSK





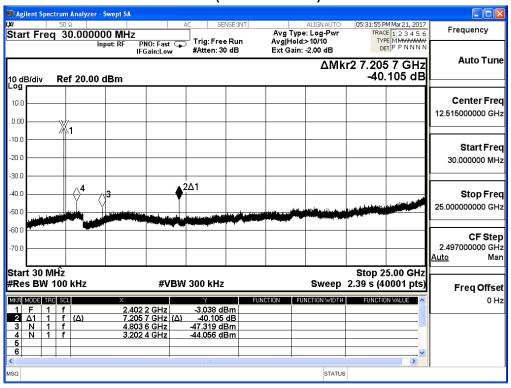
Channel 78 (30MHz-25GHz)- π/4-DQPSK



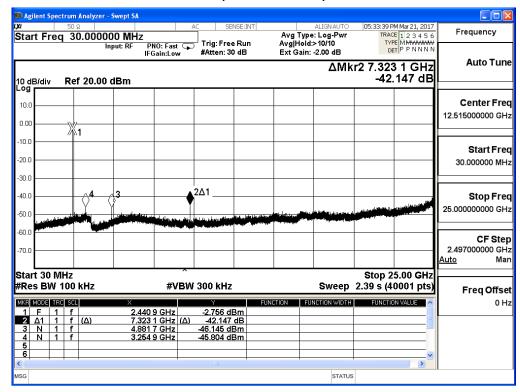


Product	UHD551-L				
Test Item	RF antenna conducted test				
Test Mode	Mode 3: Tx_3DH5				
Date of Test	2017/03/21	Test Site	SR10-H		

Channel 00 (30MHz-25GHz)- 8-DPSK

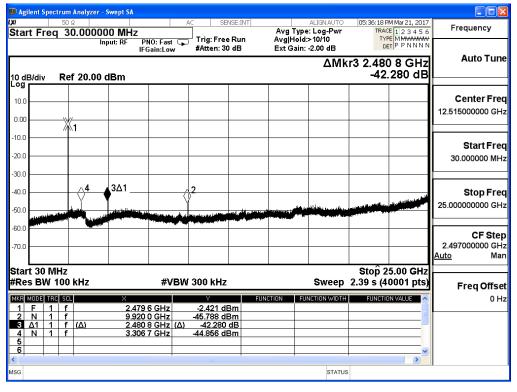


Channel 39 (30MHz-25GHz)- 8-DPSK





Channel 78 (30MHz-25GHz)- 8-DPSK





6. Band Edge

6.1. Test Equipment

The following test equipments are used during the test:

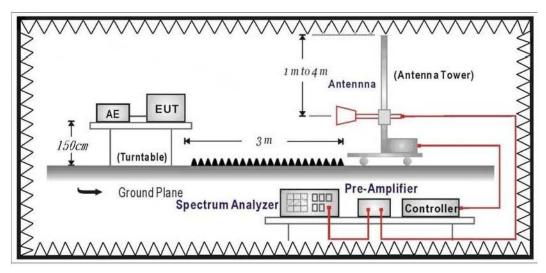
Band Edge / CB4-H

Instrument	Manufacturer	Model No.	Serial No	Next Cal. Date
Horn Antenna	Schwarzbeck	BBHA 9120	D312	2017/10/25
Signal & Spectrum Analyzer	R&S	FSV40	101049	2018/01/05

Note: All equipments that need to calibrate are with calibration period of 1 year.

6.2. Test Setup

RF Radiated Measurement:



Report No: 1740037R-RFUSP27V00



6.3. Limits

Emissions radiated outside of the specified frequency bands, except for harmonics, shall be attenuated by at least 20dB below the level of the fundamental or to the general radiated emission limits in paragraph 15.209, whichever is the lesser attenuation.

6.4. Test Procedure

The EUT was setup according to ANSI C63.10: 2013 and tested according to FHSS test procedure of FCC Public Notice DA 00-705 for compliance to FCC 47CFR 15.247 requirements

The EUT and its simulators are placed on a turn table which is 1.5 meter above ground. The turn table can rotate 360 degrees to determine the position of the maximum emission level. The EUT was positioned such that the distance from antenna to the EUT was 3 meters.

The antenna can move 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 measurement. In order to find the maximum emission, all of the interface cables must be manipulated according to ANSI C63.10: 2013 on radiated measurement.

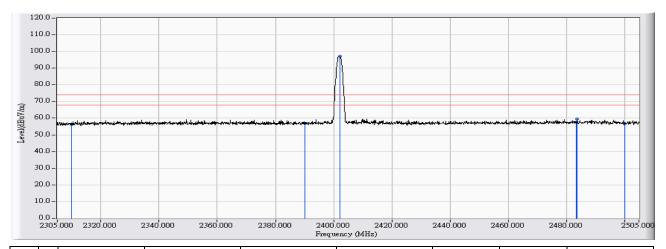
6.5. Test Specification

According to FCC Part 15 Subpart C Paragraph 15.247: 2015



6.6. Test Result

Site : CB4-H	Time : 2017/04/07
Limit : FCC_SpartC_15.209_03M_PK	Margin : 6
Probe : CB4-H_FCC_EFS_B432_1-18GHz_3M_1116 -	Power : AC 120V/60Hz
HORIZONTAL	
EUT : UHD551-L	Note : Mode 1: Tx_DH5_2402MHz

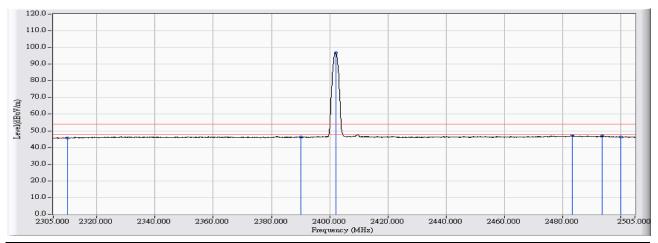


		Frequency	Correct Factor	Reading Level	Measure Level	Margin	Limit	Detector Type
		(MHz)	(dB)	(dBuV)	(dBuV/m)	(dB)	(dBuV/m)	
1		2310.000	-0.502	56.699	56.197	-17.803	74.000	PEAK
2		2390.000	-0.193	57.029	56.836	-17.164	74.000	PEAK
3	*	2402.100	-0.146	97.325	97.179	23.179	74.000	PEAK
4		2483.500	0.168	57.336	57.504	-16.496	74.000	PEAK
5		2483.800	0.169	59.300	59.470	-14.530	74.000	PEAK
6		2500.000	0.230	56.429	56.660	-17.340	74.000	PEAK

- All readings above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Peak measurements: RBW = 1MHz, VBW = 1MHz, Sweep: Auto.
- 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
- 4. " * ", means this data is the worst emission level.
- 5. Measurement Level = Reading Level + Correct Factor.
- The average measurement was not performed when the peak measured data under the limit of average detection. If the readings given are average, peak measurement should also be supplied.



Site : CB4-H	Time : 2017/04/07
Limit : FCC_SpartC_15.209_03M_AV	Margin : 6
Probe : CB4-H_FCC_EFS_B432_1-18GHz_3M_1116 -	Power : AC 120V/60Hz
HORIZONTAL	
EUT : UHD551-L	Note : Mode 1: Tx_DH5_2402MHz

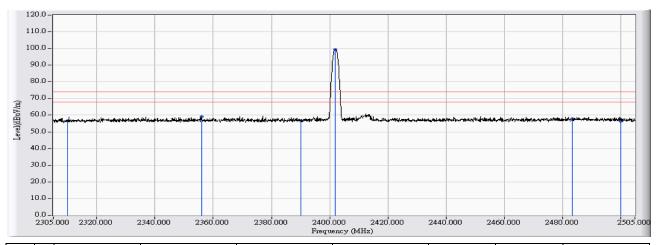


		Frequency	Correct Factor	Reading Level	Measure Level	Margin	Limit	Detector Type
		(MHz)	(dB)	(dBuV)	(dBuV/m)	(dB)	(dBuV/m)	
1		2310.000	-0.502	46.178	45.676	-8.324	54.000	AVERAGE
2		2390.000	-0.193	46.433	46.240	-7.760	54.000	AVERAGE
3	*	2402.100	-0.146	97.024	96.878	42.878	54.000	AVERAGE
4		2483.500	0.168	47.071	47.239	-6.761	54.000	AVERAGE
5		2493.800	0.208	46.653	46.861	-7.139	54.000	AVERAGE
6		2500.000	0.230	46.103	46.334	-7.666	54.000	AVERAGE

- All readings above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Peak measurements: RBW = 1MHz, VBW = 1MHz, Sweep: Auto.
- 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
- 4. " * ", means this data is the worst emission level.
- 5. Measurement Level = Reading Level + Correct Factor.
- The average measurement was not performed when the peak measured data under the limit of average detection. If the readings given are average, peak measurement should also be supplied.



Site : CB4-H	Time : 2017/04/08
Limit : FCC_SpartC_15.209_03M_PK	Margin : 6
Probe : CB4-H_FCC_EFS_B432_1-18GHz_3M_1116 -	Power : AC 120V/60Hz
VERTICAL	
EUT : UHD551-L	Note : Mode 1: Tx_DH5_2402MHz

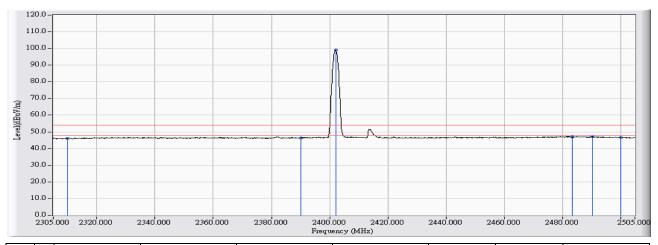


		Frequency	Correct Factor	Reading Level	Measure Level	Margin	Limit	Detector Type
		(MHz)	(dB)	(dBuV)	(dBuV/m)	(dB)	(dBuV/m)	
1		2310.000	-0.502	57.120	56.618	-17.382	74.000	PEAK
2		2355.900	-0.325	59.602	59.277	-14.723	74.000	PEAK
3		2390.000	-0.193	56.756	56.563	-17.437	74.000	PEAK
4	*	2402.000	-0.146	99.463	99.317	25.317	74.000	PEAK
5		2483.500	0.168	57.853	58.021	-15.979	74.000	PEAK
6		2500.000	0.230	55.919	56.150	-17.850	74.000	PEAK

- All readings above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Peak measurements: RBW = 1MHz, VBW = 1MHz, Sweep: Auto.
- 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
- 4. " * ", means this data is the worst emission level.
- 5. Measurement Level = Reading Level + Correct Factor.
- The average measurement was not performed when the peak measured data under the limit of average detection. If the readings given are average, peak measurement should also be supplied.



Site : CB4-H	Time : 2017/04/08
Limit : FCC_SpartC_15.209_03M_AV	Margin : 6
Probe : CB4-H_FCC_EFS_B432_1-18GHz_3M_1116 -	Power : AC 120V/60Hz
VERTICAL	
EUT : UHD551-L	Note : Mode 1: Tx_DH5_2402MHz

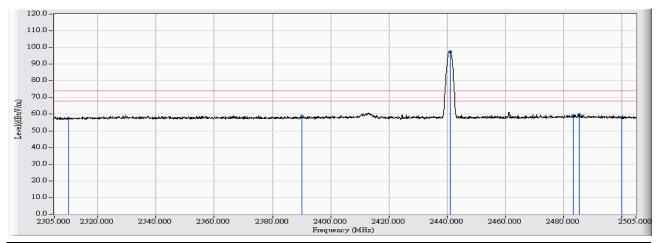


		Frequency	Correct Factor	Reading Level	Measure Level	Margin	Limit	Detector Type
		(MHz)	(dB)	(dBuV)	(dBuV/m)	(dB)	(dBuV/m)	
1		2310.000	-0.502	46.606	46.104	-7.896	54.000	AVERAGE
2		2390.000	-0.193	46.463	46.270	-7.730	54.000	AVERAGE
3	*	2402.100	-0.146	99.193	99.047	45.047	54.000	AVERAGE
4		2483.500	0.168	46.779	46.947	-7.053	54.000	AVERAGE
5		2490.500	0.195	46.940	47.135	-6.865	54.000	AVERAGE
6		2500.000	0.230	46.568	46.799	-7.201	54.000	AVERAGE

- All readings above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Peak measurements: RBW = 1MHz, VBW = 1MHz, Sweep: Auto.
- 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
- 4. " * ", means this data is the worst emission level.
- 5. Measurement Level = Reading Level + Correct Factor.
- 6. The average measurement was not performed when the peak measured data under the limit of average detection. If the readings given are average, peak measurement should also be supplied.



Site : CB4-H	Time : 2017/04/07
Limit : FCC_SpartC_15.209_03M_PK	Margin : 6
Probe : CB4-H_FCC_EFS_B432_1-18GHz_3M_1116 -	Power : AC 120V/60Hz
HORIZONTAL	
EUT : UHD551-L	Note : Mode 1: Tx_DH5_2441MHz

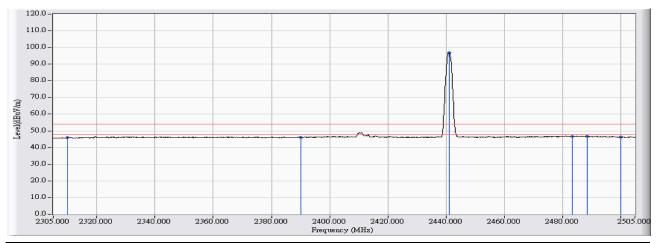


		Frequency	Correct Factor	Reading Level	Measure Level	Margin	Limit	Detector Type
		(MHz)	(dB)	(dBuV)	(dBuV/m)	(dB)	(dBuV/m)	
1		2310.000	-0.502	57.973	57.471	-16.529	74.000	PEAK
2		2390.000	-0.193	59.048	58.855	-15.145	74.000	PEAK
3	*	2441.100	0.005	97.320	97.325	23.325	74.000	PEAK
4		2483.500	0.168	59.075	59.243	-14.757	74.000	PEAK
5		2485.600	0.176	59.526	59.703	-14.297	74.000	PEAK
6		2500.000	0.230	57.630	57.861	-16.139	74.000	PEAK

- All readings above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Peak measurements: RBW = 1MHz, VBW = 1MHz, Sweep: Auto.
- 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
- 4. " * ", means this data is the worst emission level.
- 5. Measurement Level = Reading Level + Correct Factor.
- The average measurement was not performed when the peak measured data under the limit of average detection. If the readings given are average, peak measurement should also be supplied.



Site : CB4-H	Time : 2017/04/07
Limit : FCC_SpartC_15.209_03M_AV	Margin : 6
Probe : CB4-H_FCC_EFS_B432_1-18GHz_3M_1116 -	Power : AC 120V/60Hz
HORIZONTAL	
EUT : UHD551-L	Note : Mode 1: Tx_DH5_2441MHz

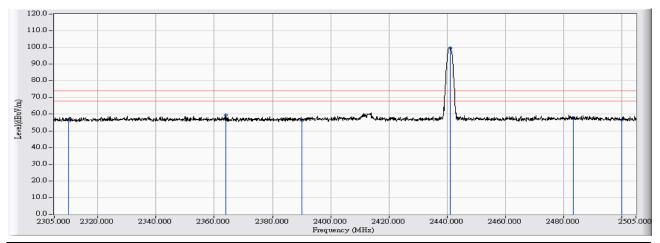


		Frequency	Correct Factor	Reading Level	Measure Level	Margin	Limit	Detector Type
		(MHz)	(dB)	(dBuV)	(dBuV/m)	(dB)	(dBuV/m)	
1		2310.000	-0.502	46.367	45.865	-8.135	54.000	AVERAGE
2		2390.000	-0.193	46.293	46.100	-7.900	54.000	AVERAGE
3	*	2441.100	0.005	96.984	96.989	42.989	54.000	AVERAGE
4		2483.500	0.168	46.468	46.636	-7.364	54.000	AVERAGE
5		2488.500	0.187	46.600	46.788	-7.212	54.000	AVERAGE
6		2500.000	0.230	46.089	46.320	-7.680	54.000	AVERAGE

- All readings above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Peak measurements: RBW = 1MHz, VBW = 1MHz, Sweep: Auto.
- 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
- 4. " * ", means this data is the worst emission level.
- 5. Measurement Level = Reading Level + Correct Factor.
- 6. The average measurement was not performed when the peak measured data under the limit of average detection. If the readings given are average, peak measurement should also be supplied.



Site : CB4-H	Time : 2017/04/08
Limit : FCC_SpartC_15.209_03M_PK	Margin : 6
Probe : CB4-H_FCC_EFS_B432_1-18GHz_3M_1116 -	Power : AC 120V/60Hz
VERTICAL	
EUT : UHD551-L	Note : Mode 1: Tx_DH5_2441MHz

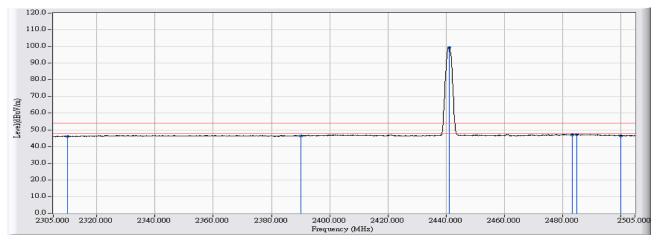


		Frequency	Correct Factor	Reading Level	Measure Level	Margin	Limit	Detector Type
		(MHz)	(dB)	(dBuV)	(dBuV/m)	(dB)	(dBuV/m)	
1		2310.000	-0.502	57.485	56.983	-17.017	74.000	PEAK
2		2364.100	-0.293	59.842	59.549	-14.451	74.000	PEAK
3		2390.000	-0.193	56.600	56.407	-17.593	74.000	PEAK
4	*	2441.100	0.005	99.879	99.884	25.884	74.000	PEAK
5		2483.500	0.168	57.659	57.827	-16.173	74.000	PEAK
6		2500.000	0.230	56.429	56.660	-17.340	74.000	PEAK

- All readings above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Peak measurements: RBW = 1MHz, VBW = 1MHz, Sweep: Auto.
- 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
- 4. " * ", means this data is the worst emission level.
- 5. Measurement Level = Reading Level + Correct Factor.
- The average measurement was not performed when the peak measured data under the limit of average detection. If the readings given are average, peak measurement should also be supplied.



Site : CB4-H	Time : 2017/04/08
Limit : FCC_SpartC_15.209_03M_AV	Margin : 6
Probe : CB4-H_FCC_EFS_B432_1-18GHz_3M_1116 -	Power : AC 120V/60Hz
VERTICAL	
EUT : UHD551-L	Note : Mode 1: Tx_DH5_2441MHz

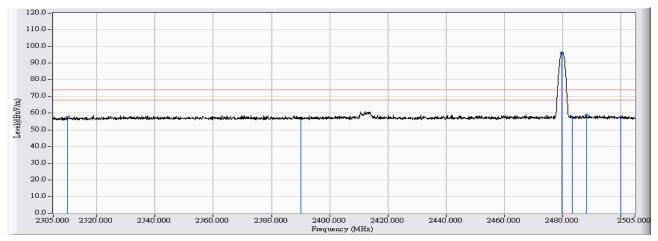


		Frequency	Correct Factor	Reading Level	Measure Level	Margin	Limit	Detector Type
		(MHz)	(dB)	(dBuV)	(dBuV/m)	(dB)	(dBuV/m)	
1		2310.000	-0.502	46.597	46.095	-7.905	54.000	AVERAGE
2		2390.000	-0.193	46.595	46.402	-7.598	54.000	AVERAGE
3	*	2441.100	0.005	99.532	99.537	45.537	54.000	AVERAGE
4		2483.500	0.168	46.733	46.901	-7.099	54.000	AVERAGE
5		2484.900	0.174	47.100	47.274	-6.726	54.000	AVERAGE
6		2500.000	0.230	46.193	46.424	-7.576	54.000	AVERAGE

- All readings above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Peak measurements: RBW = 1MHz, VBW = 1MHz, Sweep: Auto.
- 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
- 4. " * ", means this data is the worst emission level.
- 5. Measurement Level = Reading Level + Correct Factor.
- The average measurement was not performed when the peak measured data under the limit of average detection. If the readings given are average, peak measurement should also be supplied.



Site : CB4-H	Time : 2017/04/07
Limit : FCC_SpartC_15.209_03M_PK	Margin : 6
Probe : CB4-H_FCC_EFS_B432_1-18GHz_3M_1116 -	Power : AC 120V/60Hz
HORIZONTAL	
EUT : UHD551-L	Note : Mode 1: Tx_DH5_2480MHz

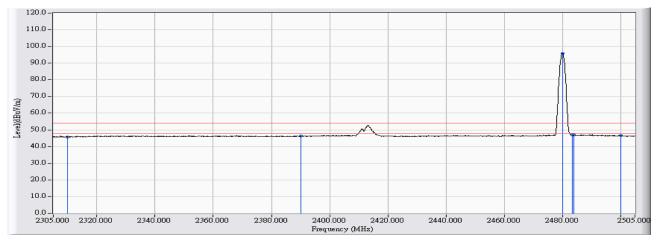


		Frequency	Correct Factor	Reading Level	Measure Level	Margin	Limit	Detector Type
		(MHz)	(dB)	(dBuV)	(dBuV/m)	(dB)	(dBuV/m)	
1		2310.000	-0.502	57.781	57.279	-16.721	74.000	PEAK
2		2390.000	-0.193	57.086	56.893	-17.107	74.000	PEAK
3	*	2479.800	0.155	96.049	96.203	22.203	74.000	PEAK
4		2483.500	0.168	57.531	57.699	-16.301	74.000	PEAK
5		2488.300	0.187	58.603	58.790	-15.210	74.000	PEAK
6		2500.000	0.230	57.422	57.653	-16.347	74.000	PEAK

- All readings above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Peak measurements: RBW = 1MHz, VBW = 1MHz, Sweep: Auto.
- 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
- 4. " * ", means this data is the worst emission level.
- 5. Measurement Level = Reading Level + Correct Factor.
- The average measurement was not performed when the peak measured data under the limit of average detection. If the readings given are average, peak measurement should also be supplied.



Site : CB4-H	Time : 2017/04/07
Limit : FCC_SpartC_15.209_03M_AV	Margin : 6
Probe : CB4-H_FCC_EFS_B432_1-18GHz_3M_1116 -	Power : AC 120V/60Hz
HORIZONTAL	
EUT : UHD551-L	Note : Mode 1: Tx_DH5_2480MHz

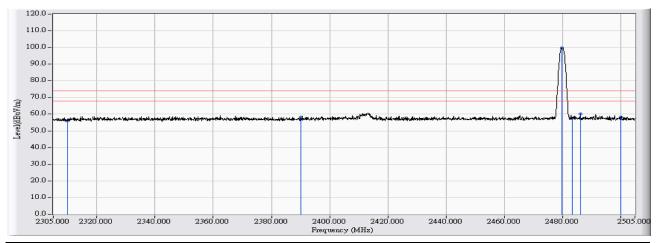


		Frequency	Correct Factor	Reading Level	Measure Level	Margin	Limit	Detector Type
		(MHz)	(dB)	(dBuV)	(dBuV/m)	(dB)	(dBuV/m)	
1		2310.000	-0.502	46.307	45.805	-8.195	54.000	AVERAGE
2		2390.000	-0.193	46.558	46.365	-7.635	54.000	AVERAGE
3	*	2480.000	0.155	95.708	95.863	41.863	54.000	AVERAGE
4		2483.500	0.168	46.732	46.900	-7.100	54.000	AVERAGE
5		2484.100	0.171	46.719	46.890	-7.110	54.000	AVERAGE
6		2500.000	0.230	46.491	46.722	-7.278	54.000	AVERAGE

- All readings above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Peak measurements: RBW = 1MHz, VBW = 1MHz, Sweep: Auto.
- 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
- 4. " * ", means this data is the worst emission level.
- 5. Measurement Level = Reading Level + Correct Factor.
- The average measurement was not performed when the peak measured data under the limit of average detection. If the readings given are average, peak measurement should also be supplied.



Site : CB4-H	Time : 2017/04/08
Limit : FCC_SpartC_15.209_03M_PK	Margin : 6
Probe : CB4-H_FCC_EFS_B432_1-18GHz_3M_1116 -	Power : AC 120V/60Hz
VERTICAL	
EUT : UHD551-L	Note : Mode 1: Tx_DH5_2480MHz

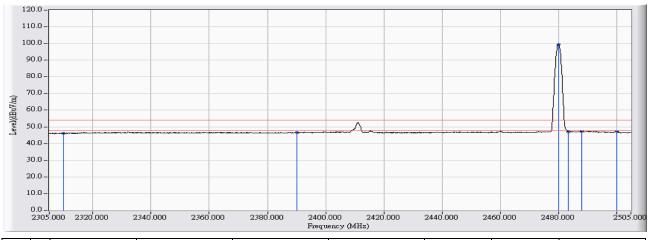


		Frequency	Correct Factor	Reading Level	Measure Level	Margin	Limit	Detector Type
		(MHz)	(dB)	(dBuV)	(dBuV/m)	(dB)	(dBuV/m)	
1		2310.000	-0.502	56.552	56.050	-17.950	74.000	PEAK
2		2390.000	-0.193	58.519	58.326	-15.674	74.000	PEAK
3	*	2479.800	0.155	99.692	99.846	25.846	74.000	PEAK
4		2483.500	0.168	57.492	57.660	-16.340	74.000	PEAK
5		2486.200	0.179	59.976	60.155	-13.845	74.000	PEAK
6		2500.000	0.230	57.945	58.176	-15.824	74.000	PEAK

- All readings above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Peak measurements: RBW = 1MHz, VBW = 1MHz, Sweep: Auto.
- 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
- 4. " * ", means this data is the worst emission level.
- 5. Measurement Level = Reading Level + Correct Factor.
- The average measurement was not performed when the peak measured data under the limit of average detection. If the readings given are average, peak measurement should also be supplied.



Site : CB4-H	Time : 2017/04/08
Limit : FCC_SpartC_15.209_03M_AV	Margin : 6
Probe : CB4-H_FCC_EFS_B432_1-18GHz_3M_1116 -	Power : AC 120V/60Hz
VERTICAL	
EUT : UHD551-L	Note : Mode 1: Tx_DH5_2480MHz

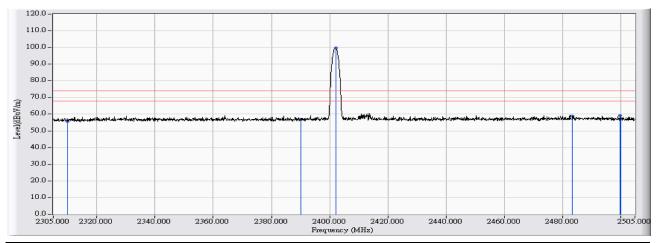


		Frequency	Correct Factor	Reading Level	Measure Level	Margin	Limit	Detector Type
		(MHz)	(dB)	(dBuV)	(dBuV/m)	(dB)	(dBuV/m)	
1		2310.000	-0.502	46.508	46.006	-7.994	54.000	AVERAGE
2		2390.000	-0.193	46.686	46.493	-7.507	54.000	AVERAGE
3	*	2480.000	0.155	99.385	99.540	45.540	54.000	AVERAGE
4		2483.500	0.168	46.960	47.128	-6.872	54.000	AVERAGE
5		2488.100	0.186	47.112	47.298	-6.702	54.000	AVERAGE
6		2500.000	0.230	47.023	47.254	-6.746	54.000	AVERAGE

- All readings above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Peak measurements: RBW = 1MHz, VBW = 1MHz, Sweep: Auto.
- 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
- 4. " * ", means this data is the worst emission level.
- 5. Measurement Level = Reading Level + Correct Factor.
- The average measurement was not performed when the peak measured data under the limit of average detection. If the readings given are average, peak measurement should also be supplied.



Site : CB4-H	Time : 2017/04/08
Limit : FCC_SpartC_15.209_03M_PK	Margin : 6
Probe : CB4-H_FCC_EFS_B432_1-18GHz_3M_1116 -	Power : AC 120V/60Hz
HORIZONTAL	
EUT : UHD551-L	Note : Mode 2: Tx_2DH5_2402MHz

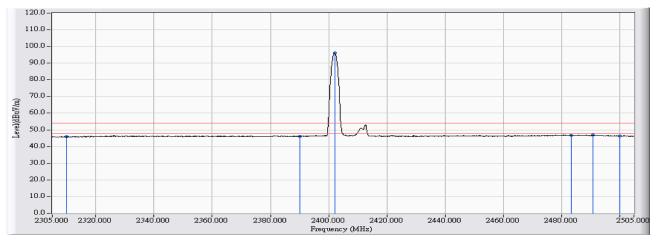


		Frequency	Correct Factor	Reading Level	Measure Level	Margin	Limit	Detector Type
		(MHz)	(dB)	(dBuV)	(dBuV/m)	(dB)	(dBuV/m)	
1		2310.000	-0.502	56.137	55.635	-18.365	74.000	PEAK
2		2390.000	-0.193	57.259	57.066	-16.934	74.000	PEAK
3	*	2402.100	-0.146	99.865	99.719	25.719	74.000	PEAK
4		2483.500	0.168	58.816	58.984	-15.016	74.000	PEAK
5		2499.800	0.230	58.934	59.164	-14.836	74.000	PEAK
6		2500.000	0.230	57.147	57.378	-16.622	74.000	PEAK

- All readings above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Peak measurements: RBW = 1MHz, VBW = 1MHz, Sweep: Auto.
- 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
- 4. " * ", means this data is the worst emission level.
- 5. Measurement Level = Reading Level + Correct Factor.
- The average measurement was not performed when the peak measured data under the limit of average detection. If the readings given are average, peak measurement should also be supplied.



Site : CB4-H	Time : 2017/04/08
Limit : FCC_SpartC_15.209_03M_AV	Margin: 6
Probe : CB4-H_FCC_EFS_B432_1-18GHz_3M_1116 -	Power : AC 120V/60Hz
HORIZONTAL	
EUT : UHD551-L	Note : Mode 2: Tx_2DH5_2402MHz

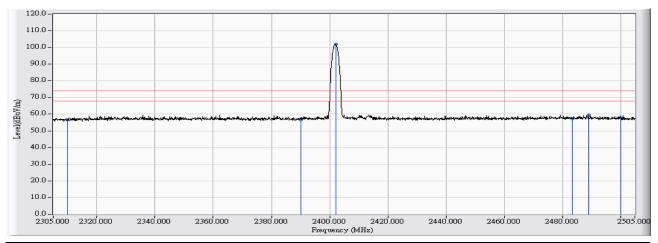


		Frequency	Correct Factor	Reading Level	Measure Level	Margin	Limit	Detector Type
		(MHz)	(dB)	(dBuV)	(dBuV/m)	(dB)	(dBuV/m)	
1		2310.000	-0.502	46.506	46.004	-7.996	54.000	AVERAGE
2		2390.000	-0.193	46.251	46.058	-7.942	54.000	AVERAGE
3	*	2402.100	-0.146	96.290	96.144	42.144	54.000	AVERAGE
4		2483.500	0.168	46.445	46.613	-7.387	54.000	AVERAGE
5		2490.800	0.197	46.704	46.901	-7.099	54.000	AVERAGE
6		2500.000	0.230	46.158	46.389	-7.611	54.000	AVERAGE

- All readings above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Peak measurements: RBW = 1MHz, VBW = 1MHz, Sweep: Auto.
- 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
- 4. " * ", means this data is the worst emission level.
- 5. Measurement Level = Reading Level + Correct Factor.
- The average measurement was not performed when the peak measured data under the limit of average detection. If the readings given are average, peak measurement should also be supplied.



Site : CB4-H	Time : 2017/04/08
Limit : FCC_SpartC_15.209_03M_PK	Margin : 6
Probe : CB4-H_FCC_EFS_B432_1-18GHz_3M_1116 -	Power : AC 120V/60Hz
VERTICAL	
EUT : UHD551-L	Note : Mode 2: Tx_2DH5_2402MHz

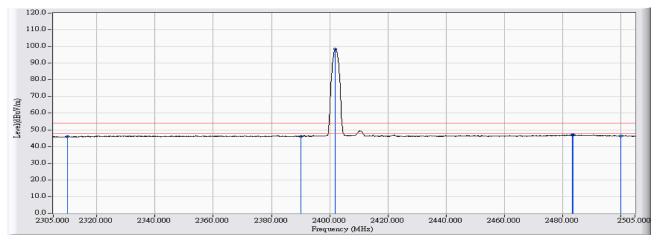


		Frequency	Correct Factor	Reading Level	Measure Level	Margin	Limit	Detector Type
		(MHz)	(dB)	(dBuV)	(dBuV/m)	(dB)	(dBuV/m)	
1		2310.000	-0.502	57.220	56.718	-17.282	74.000	PEAK
2		2390.000	-0.193	56.940	56.747	-17.253	74.000	PEAK
3	*	2402.100	-0.146	101.984	101.838	27.838	74.000	PEAK
4		2483.500	0.168	57.198	57.366	-16.634	74.000	PEAK
5		2489.100	0.190	59.348	59.538	-14.462	74.000	PEAK
6		2500.000	0.230	57.823	58.054	-15.946	74.000	PEAK

- All readings above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Peak measurements: RBW = 1MHz, VBW = 1MHz, Sweep: Auto.
- 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
- 4. " * ", means this data is the worst emission level.
- 5. Measurement Level = Reading Level + Correct Factor.
- The average measurement was not performed when the peak measured data under the limit of average detection. If the readings given are average, peak measurement should also be supplied.



Site : CB4-H	Time : 2017/04/08
Limit : FCC_SpartC_15.209_03M_AV	Margin : 6
Probe : CB4-H_FCC_EFS_B432_1-18GHz_3M_1116 -	Power : AC 120V/60Hz
VERTICAL	
EUT : UHD551-L	Note : Mode 2: Tx_2DH5_2402MHz

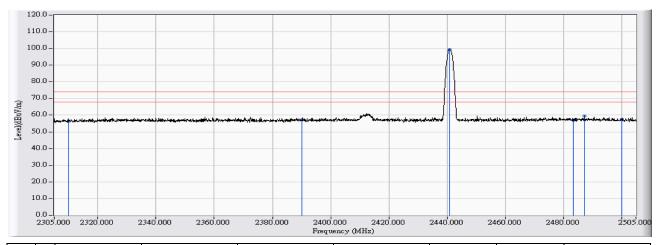


		Frequency	Correct Factor	Reading Level	Measure Level	Margin	Limit	Detector Type
		(MHz)	(dB)	(dBuV)	(dBuV/m)	(dB)	(dBuV/m)	
1		2310.000	-0.502	46.506	46.004	-7.996	54.000	AVERAGE
2		2390.000	-0.193	46.348	46.155	-7.845	54.000	AVERAGE
3	*	2402.000	-0.146	98.467	98.321	44.321	54.000	AVERAGE
4		2483.500	0.168	46.712	46.880	-7.120	54.000	AVERAGE
5		2483.600	0.169	46.817	46.986	-7.014	54.000	AVERAGE
6		2500.000	0.230	45.948	46.179	-7.821	54.000	AVERAGE

- All readings above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Peak measurements: RBW = 1MHz, VBW = 1MHz, Sweep: Auto.
- 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
- 4. " * ", means this data is the worst emission level.
- 5. Measurement Level = Reading Level + Correct Factor.
- 6. The average measurement was not performed when the peak measured data under the limit of average detection. If the readings given are average, peak measurement should also be supplied.



Site : CB4-H	Time : 2017/04/08
Limit : FCC_SpartC_15.209_03M_PK	Margin : 6
Probe : CB4-H_FCC_EFS_B432_1-18GHz_3M_1116 -	Power : AC 120V/60Hz
HORIZONTAL	
EUT : UHD551-L	Note : Mode 2: Tx_2DH5_2441MHz

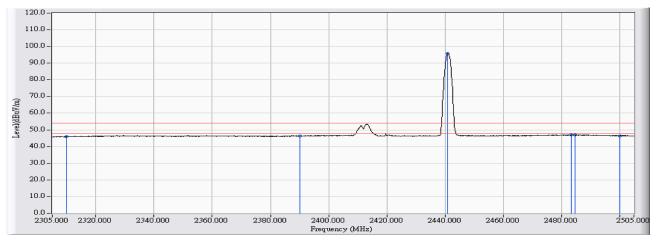


		Frequency	Correct Factor	Reading Level	Measure Level	Margin	Limit	Detector Type
		(MHz)	(dB)	(dBuV)	(dBuV/m)	(dB)	(dBuV/m)	
1		2310.000	-0.502	56.796	56.294	-17.706	74.000	PEAK
2		2390.000	-0.193	57.334	57.141	-16.859	74.000	PEAK
3	*	2440.900	0.004	99.417	99.421	25.421	74.000	PEAK
4		2483.500	0.168	56.686	56.854	-17.146	74.000	PEAK
5		2487.200	0.182	59.299	59.482	-14.518	74.000	PEAK
6		2500.000	0.230	57.242	57.473	-16.527	74.000	PEAK

- All readings above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Peak measurements: RBW = 1MHz, VBW = 1MHz, Sweep: Auto.
- 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
- 4. " * ", means this data is the worst emission level.
- 5. Measurement Level = Reading Level + Correct Factor.
- The average measurement was not performed when the peak measured data under the limit of average detection. If the readings given are average, peak measurement should also be supplied.



Site : CB4-H	Time : 2017/04/08
Limit : FCC_SpartC_15.209_03M_AV	Margin : 6
Probe : CB4-H_FCC_EFS_B432_1-18GHz_3M_1116 -	Power : AC 120V/60Hz
HORIZONTAL	
EUT : UHD551-L	Note : Mode 2: Tx_2DH5_2441MHz

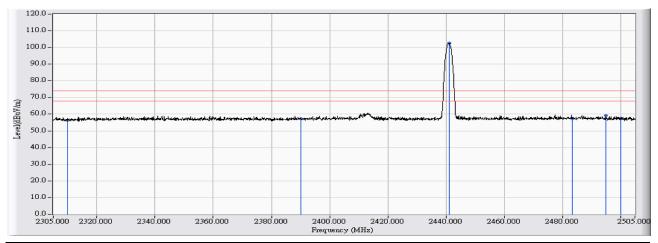


		Frequency	Correct Factor	Reading Level	Measure Level	Margin	Limit	Detector Type
		(MHz)	(dB)	(dBuV)	(dBuV/m)	(dB)	(dBuV/m)	
1		2310.000	-0.502	46.530	46.028	-7.972	54.000	AVERAGE
2		2390.000	-0.193	46.662	46.469	-7.531	54.000	AVERAGE
3	*	2441.000	0.004	95.958	95.962	41.962	54.000	AVERAGE
4		2483.500	0.168	46.687	46.855	-7.145	54.000	AVERAGE
5		2484.700	0.173	46.891	47.064	-6.936	54.000	AVERAGE
6		2500.000	0.230	46.236	46.467	-7.533	54.000	AVERAGE

- All readings above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Peak measurements: RBW = 1MHz, VBW = 1MHz, Sweep: Auto.
- 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
- 4. " * ", means this data is the worst emission level.
- 5. Measurement Level = Reading Level + Correct Factor.
- The average measurement was not performed when the peak measured data under the limit of average detection. If the readings given are average, peak measurement should also be supplied.



Site : CB4-H	Time : 2017/04/08
Limit : FCC_SpartC_15.209_03M_PK	Margin : 6
Probe : CB4-H_FCC_EFS_B432_1-18GHz_3M_1116 -	Power : AC 120V/60Hz
VERTICAL	
EUT : UHD551-L	Note : Mode 2: Tx_2DH5_2441MHz

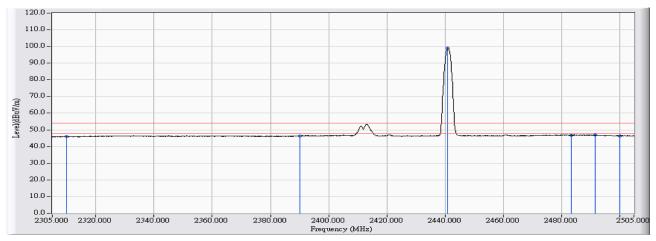


		Frequency	Correct Factor	Reading Level	Measure Level	Margin	Limit	Detector Type
		(MHz)	(dB)	(dBuV)	(dBuV/m)	(dB)	(dBuV/m)	
1		2310.000	-0.502	56.871	56.369	-17.631	74.000	PEAK
2		2390.000	-0.193	57.499	57.306	-16.694	74.000	PEAK
3	*	2441.100	0.005	102.564	102.569	28.569	74.000	PEAK
4		2483.500	0.168	57.195	57.363	-16.637	74.000	PEAK
5		2494.900	0.213	58.850	59.062	-14.938	74.000	PEAK
6		2500.000	0.230	57.293	57.524	-16.476	74.000	PEAK

- All readings above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Peak measurements: RBW = 1MHz, VBW = 1MHz, Sweep: Auto.
- 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
- 4. " * ", means this data is the worst emission level.
- 5. Measurement Level = Reading Level + Correct Factor.
- The average measurement was not performed when the peak measured data under the limit of average detection. If the readings given are average, peak measurement should also be supplied.



Site : CB4-H	Time : 2017/04/08
Limit : FCC_SpartC_15.209_03M_AV	Margin: 6
Probe : CB4-H_FCC_EFS_B432_1-18GHz_3M_1116 -	Power : AC 120V/60Hz
VERTICAL	
EUT : UHD551-L	Note : Mode 2: Tx_2DH5_2441MHz

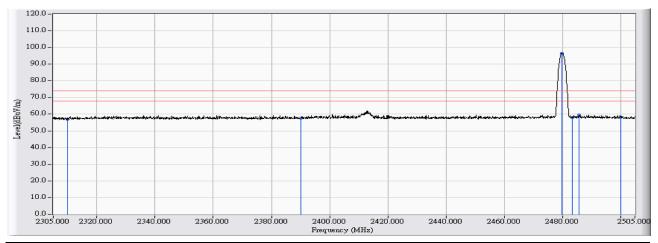


		Frequency	Correct Factor	Reading Level	Measure Level	Margin	Limit	Detector Type
		(MHz)	(dB)	(dBuV)	(dBuV/m)	(dB)	(dBuV/m)	
1		2310.000	-0.502	46.363	45.861	-8.139	54.000	AVERAGE
2		2390.000	-0.193	46.514	46.321	-7.679	54.000	AVERAGE
3	*	2441.000	0.004	99.080	99.084	45.084	54.000	AVERAGE
4		2483.500	0.168	46.616	46.784	-7.216	54.000	AVERAGE
5		2491.600	0.200	46.726	46.926	-7.074	54.000	AVERAGE
6		2500.000	0.230	46.112	46.343	-7.657	54.000	AVERAGE

- All readings above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Peak measurements: RBW = 1MHz, VBW = 1MHz, Sweep: Auto.
- 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
- 4. " * ", means this data is the worst emission level.
- 5. Measurement Level = Reading Level + Correct Factor.
- The average measurement was not performed when the peak measured data under the limit of average detection. If the readings given are average, peak measurement should also be supplied.



Site : CB4-H	Time : 2017/04/08
Limit : FCC_SpartC_15.209_03M_PK	Margin : 6
Probe : CB4-H_FCC_EFS_B432_1-18GHz_3M_1116 -	Power : AC 120V/60Hz
HORIZONTAL	
EUT : UHD551-L	Note: Mode 2: Tx_2DH5_2480MHz

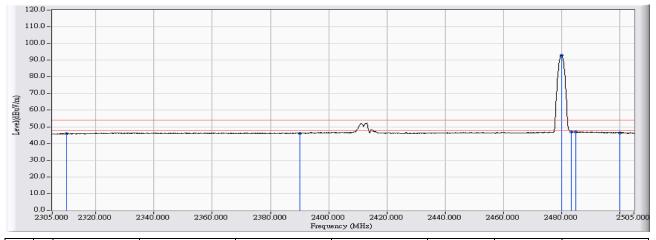


		Frequency	Correct Factor	Reading Level	Measure Level	Margin	Limit	Detector Type
		(MHz)	(dB)	(dBuV)	(dBuV/m)	(dB)	(dBuV/m)	
1		2310.000	-0.502	57.409	56.907	-17.093	74.000	PEAK
2		2390.000	-0.193	57.633	57.440	-16.560	74.000	PEAK
3	*	2479.900	0.155	96.411	96.565	22.565	74.000	PEAK
4		2483.500	0.168	57.812	57.980	-16.020	74.000	PEAK
5		2485.700	0.177	59.310	59.487	-14.513	74.000	PEAK
6		2500.000	0.230	58.117	58.348	-15.652	74.000	PEAK

- All readings above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Peak measurements: RBW = 1MHz, VBW = 1MHz, Sweep: Auto.
- 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
- 4. " * ", means this data is the worst emission level.
- 5. Measurement Level = Reading Level + Correct Factor.
- The average measurement was not performed when the peak measured data under the limit of average detection. If the readings given are average, peak measurement should also be supplied.



Site : CB4-H	Time : 2017/04/08
Limit : FCC_SpartC_15.209_03M_AV	Margin : 6
Probe : CB4-H_FCC_EFS_B432_1-18GHz_3M_1116 -	Power : AC 120V/60Hz
HORIZONTAL	
EUT : UHD551-L	Note : Mode 2: Tx_2DH5_2480MHz

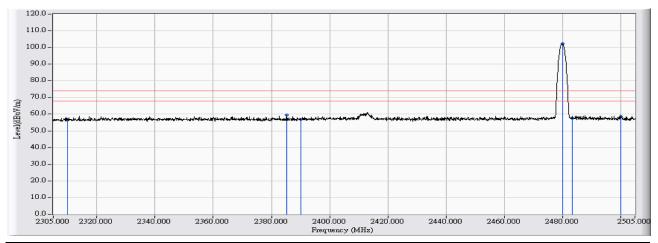


		Frequency	Correct Factor	Reading Level	Measure Level	Margin	Limit	Detector Type
		(MHz)	(dB)	(dBuV)	(dBuV/m)	(dB)	(dBuV/m)	
1		2310.000	-0.502	46.436	45.934	-8.066	54.000	AVERAGE
2		2390.000	-0.193	46.341	46.148	-7.852	54.000	AVERAGE
3	*	2480.100	0.155	92.906	93.061	39.061	54.000	AVERAGE
4		2483.500	0.168	46.718	46.886	-7.114	54.000	AVERAGE
5		2485.100	0.174	46.914	47.089	-6.911	54.000	AVERAGE
6		2500.000	0.230	46.202	46.433	-7.567	54.000	AVERAGE

- All readings above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Peak measurements: RBW = 1MHz, VBW = 1MHz, Sweep: Auto.
- 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
- 4. " * ", means this data is the worst emission level.
- 5. Measurement Level = Reading Level + Correct Factor.
- 6. The average measurement was not performed when the peak measured data under the limit of average detection. If the readings given are average, peak measurement should also be supplied.



Site : CB4-H	Time : 2017/04/08
Limit : FCC_SpartC_15.209_03M_PK	Margin : 6
Probe : CB4-H_FCC_EFS_B432_1-18GHz_3M_1116 -	Power : AC 120V/60Hz
VERTICAL	
EUT : UHD551-L	Note: Mode 2: Tx_2DH5_2480MHz

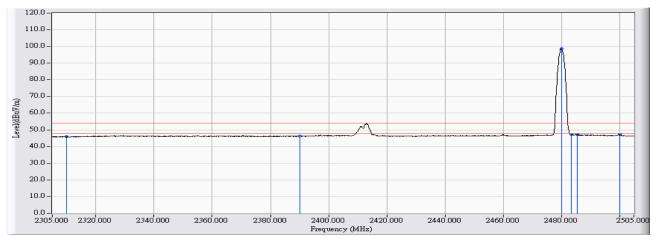


		Frequency	Correct Factor	Reading Level	Measure Level	Margin	Limit	Detector Type
		(MHz)	(dB)	(dBuV)	(dBuV/m)	(dB)	(dBuV/m)	
1		2310.000	-0.502	57.452	56.950	-17.050	74.000	PEAK
2		2385.300	-0.211	59.571	59.360	-14.640	74.000	PEAK
3		2390.000	-0.193	57.228	57.035	-16.965	74.000	PEAK
4	*	2480.100	0.155	102.005	102.160	28.160	74.000	PEAK
5		2483.500	0.168	57.493	57.661	-16.339	74.000	PEAK
6		2500.000	0.230	58.169	58.400	-15.600	74.000	PEAK

- All readings above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Peak measurements: RBW = 1MHz, VBW = 1MHz, Sweep: Auto.
- 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
- 4. " * ", means this data is the worst emission level.
- 5. Measurement Level = Reading Level + Correct Factor.
- The average measurement was not performed when the peak measured data under the limit of average detection. If the readings given are average, peak measurement should also be supplied.



Site : CB4-H	Time : 2017/04/08
Limit : FCC_SpartC_15.209_03M_AV	Margin : 6
Probe : CB4-H_FCC_EFS_B432_1-18GHz_3M_1116 -	Power : AC 120V/60Hz
VERTICAL	
EUT : UHD551-L	Note : Mode 2: Tx_2DH5_2480MHz

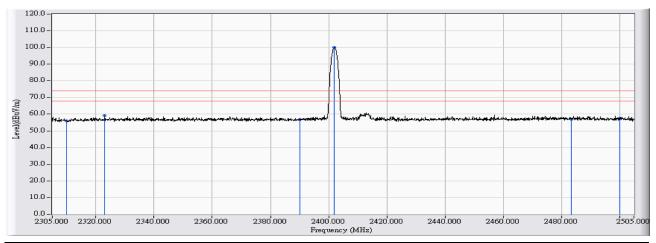


		Frequency	Correct Factor	Reading Level	Measure Level	Margin	Limit	Detector Type
		(MHz)	(dB)	(dBuV)	(dBuV/m)	(dB)	(dBuV/m)	
1		2310.000	-0.502	46.476	45.974	-8.026	54.000	AVERAGE
2		2390.000	-0.193	46.608	46.415	-7.585	54.000	AVERAGE
3	*	2480.000	0.155	98.534	98.689	44.689	54.000	AVERAGE
4		2483.500	0.168	46.968	47.136	-6.864	54.000	AVERAGE
5		2485.600	0.176	47.113	47.290	-6.710	54.000	AVERAGE
6		2500.000	0.230	46.907	47.138	-6.862	54.000	AVERAGE

- All readings above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Peak measurements: RBW = 1MHz, VBW = 1MHz, Sweep: Auto.
- 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
- 4. " * ", means this data is the worst emission level.
- 5. Measurement Level = Reading Level + Correct Factor.
- The average measurement was not performed when the peak measured data under the limit of average detection. If the readings given are average, peak measurement should also be supplied.



Site : CB4-H	Time : 2017/04/08
Limit : FCC_SpartC_15.209_03M_PK	Margin : 6
Probe : CB4-H_FCC_EFS_B432_1-18GHz_3M_1116 -	Power : AC 120V/60Hz
HORIZONTAL	
EUT : UHD551-L	Note : Mode 3: Tx_3DH5_2402MHz

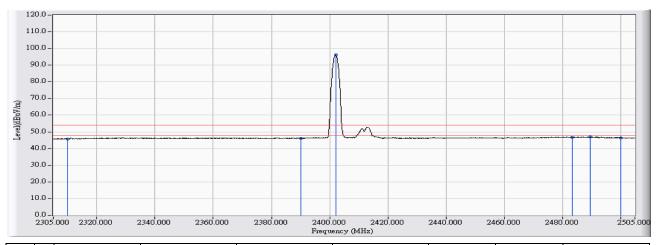


		Frequency	Correct Factor	Reading Level	Measure Level	Margin	Limit	Detector Type
		(MHz)	(dB)	(dBuV)	(dBuV/m)	(dB)	(dBuV/m)	
1		2310.000	-0.502	56.582	56.080	-17.920	74.000	PEAK
2		2323.000	-0.452	59.556	59.104	-14.896	74.000	PEAK
3		2390.000	-0.193	57.070	56.877	-17.123	74.000	PEAK
4	*	2402.000	-0.146	100.147	100.001	26.001	74.000	PEAK
5		2483.500	0.168	56.749	56.917	-17.083	74.000	PEAK
6		2500.000	0.230	57.398	57.629	-16.371	74.000	PEAK

- All readings above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Peak measurements: RBW = 1MHz, VBW = 1MHz, Sweep: Auto.
- 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
- 4. " * ", means this data is the worst emission level.
- 5. Measurement Level = Reading Level + Correct Factor.
- The average measurement was not performed when the peak measured data under the limit of average detection. If the readings given are average, peak measurement should also be supplied.



Site : CB4-H	Time : 2017/04/08
Limit : FCC_SpartC_15.209_03M_AV	Margin : 6
Probe : CB4-H_FCC_EFS_B432_1-18GHz_3M_1116 -	Power : AC 120V/60Hz
HORIZONTAL	
EUT : UHD551-L	Note : Mode 3: Tx_3DH5_2402MHz

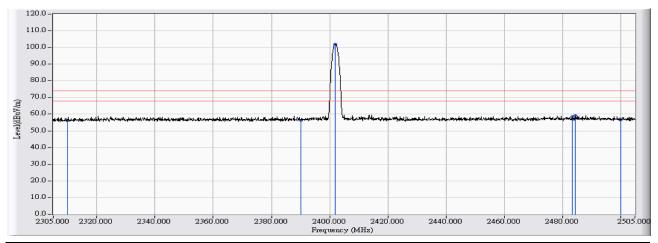


		Frequency	Correct Factor	Reading Level	Measure Level	Margin	Limit	Detector Type
		(MHz)	(dB)	(dBuV)	(dBuV/m)	(dB)	(dBuV/m)	
1		2310.000	-0.502	46.244	45.742	-8.258	54.000	AVERAGE
2		2390.000	-0.193	46.355	46.162	-7.838	54.000	AVERAGE
3	*	2402.100	-0.146	96.232	96.086	42.086	54.000	AVERAGE
4		2483.500	0.168	46.465	46.633	-7.367	54.000	AVERAGE
5		2489.700	0.192	46.857	47.049	-6.951	54.000	AVERAGE
6		2500.000	0.230	46.110	46.341	-7.659	54.000	AVERAGE

- All readings above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Peak measurements: RBW = 1MHz, VBW = 1MHz, Sweep: Auto.
- 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
- 4. " * ", means this data is the worst emission level.
- 5. Measurement Level = Reading Level + Correct Factor.
- The average measurement was not performed when the peak measured data under the limit of average detection. If the readings given are average, peak measurement should also be supplied.



Site : CB4-H	Time : 2017/04/08
Limit : FCC_SpartC_15.209_03M_PK	Margin : 6
Probe : CB4-H_FCC_EFS_B432_1-18GHz_3M_1116 -	Power : AC 120V/60Hz
VERTICAL	
EUT : UHD551-L	Note: Mode 3: Tx_3DH5_2402MHz

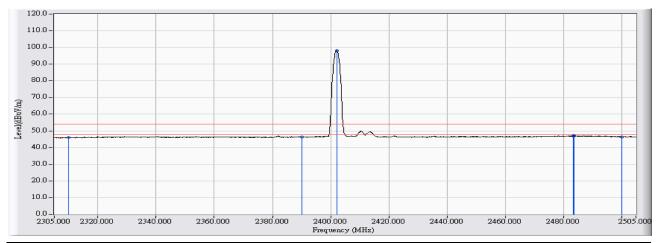


		Frequency	Correct Factor	Reading Level	Measure Level	Margin	Limit	Detector Type
		(MHz)	(dB)	(dBuV)	(dBuV/m)	(dB)	(dBuV/m)	
1		2310.000	-0.502	56.869	56.367	-17.633	74.000	PEAK
2		2390.000	-0.193	56.568	56.375	-17.625	74.000	PEAK
3	*	2401.900	-0.146	102.290	102.143	28.143	74.000	PEAK
4		2483.500	0.168	58.510	58.678	-15.322	74.000	PEAK
5		2484.600	0.173	59.004	59.177	-14.823	74.000	PEAK
6		2500.000	0.230	56.386	56.617	-17.383	74.000	PEAK

- All readings above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Peak measurements: RBW = 1MHz, VBW = 1MHz, Sweep: Auto.
- 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
- 4. " * ", means this data is the worst emission level.
- 5. Measurement Level = Reading Level + Correct Factor.
- The average measurement was not performed when the peak measured data under the limit of average detection. If the readings given are average, peak measurement should also be supplied.



Site : CB4-H	Time : 2017/04/08
Limit : FCC_SpartC_15.209_03M_AV	Margin : 6
Probe : CB4-H_FCC_EFS_B432_1-18GHz_3M_1116 -	Power : AC 120V/60Hz
VERTICAL	
EUT : UHD551-L	Note : Mode 3: Tx_3DH5_2402MHz

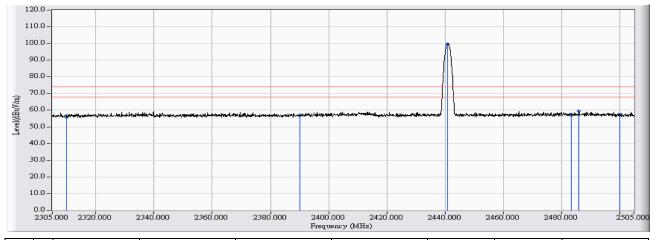


		Frequency	Correct Factor	Reading Level	Measure Level	Margin	Limit	Detector Type
		(MHz)	(dB)	(dBuV)	(dBuV/m)	(dB)	(dBuV/m)	
1		2310.000	-0.502	46.472	45.970	-8.030	54.000	AVERAGE
2		2390.000	-0.193	46.449	46.256	-7.744	54.000	AVERAGE
3	*	2402.100	-0.146	98.387	98.241	44.241	54.000	AVERAGE
4		2483.500	0.168	46.728	46.896	-7.104	54.000	AVERAGE
5		2483.700	0.169	46.745	46.914	-7.086	54.000	AVERAGE
6		2500.000	0.230	46.186	46.417	-7.583	54.000	AVERAGE

- All readings above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Peak measurements: RBW = 1MHz, VBW = 1MHz, Sweep: Auto.
- 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
- 4. " * ", means this data is the worst emission level.
- 5. Measurement Level = Reading Level + Correct Factor.
- The average measurement was not performed when the peak measured data under the limit of average detection. If the readings given are average, peak measurement should also be supplied.



Site : CB4-H	Time : 2017/04/08
Limit : FCC_SpartC_15.209_03M_PK	Margin : 6
Probe : CB4-H_FCC_EFS_B432_1-18GHz_3M_1116 -	Power : AC 120V/60Hz
HORIZONTAL	
EUT : UHD551-L	Note: Mode 3: Tx_3DH5_2441MHz

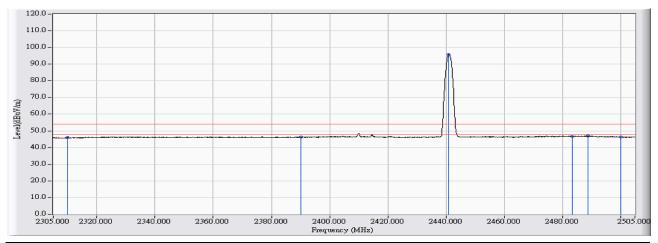


		Frequency	Correct Factor	Reading Level	Measure Level	Margin	Limit	Detector Type
		(MHz)	(dB)	(dBuV)	(dBuV/m)	(dB)	(dBuV/m)	
1		2310.000	-0.502	56.088	55.586	-18.414	74.000	PEAK
2		2390.000	-0.193	56.853	56.660	-17.340	74.000	PEAK
3	*	2440.900	0.004	99.881	99.885	25.885	74.000	PEAK
4		2483.500	0.168	56.740	56.908	-17.092	74.000	PEAK
5		2486.100	0.179	59.256	59.434	-14.566	74.000	PEAK
6		2500.000	0.230	57.444	57.675	-16.325	74.000	PEAK

- All readings above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Peak measurements: RBW = 1MHz, VBW = 1MHz, Sweep: Auto.
- 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
- 4. " * ", means this data is the worst emission level.
- 5. Measurement Level = Reading Level + Correct Factor.
- The average measurement was not performed when the peak measured data under the limit of average detection. If the readings given are average, peak measurement should also be supplied.



Site : CB4-H	Time : 2017/04/08
Limit : FCC_SpartC_15.209_03M_AV	Margin : 6
Probe : CB4-H_FCC_EFS_B432_1-18GHz_3M_1116 -	Power : AC 120V/60Hz
HORIZONTAL	
EUT : UHD551-L	Note: Mode 3: Tx_3DH5_2441MHz

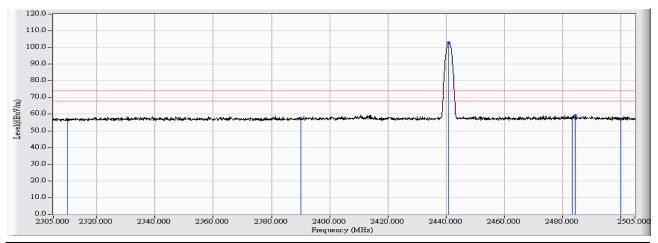


		Frequency	Correct Factor	Reading Level	Measure Level	Margin	Limit	Detector Type
		(MHz)	(dB)	(dBuV)	(dBuV/m)	(dB)	(dBuV/m)	
1		2310.000	-0.502	46.393	45.891	-8.109	54.000	AVERAGE
2		2390.000	-0.193	46.460	46.267	-7.733	54.000	AVERAGE
3	*	2441.000	0.004	95.945	95.949	41.949	54.000	AVERAGE
4		2483.500	0.168	46.453	46.621	-7.379	54.000	AVERAGE
5		2488.900	0.189	46.801	46.990	-7.010	54.000	AVERAGE
6		2500.000	0.230	45.961	46.192	-7.808	54.000	AVERAGE

- All readings above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Peak measurements: RBW = 1MHz, VBW = 1MHz, Sweep: Auto.
- 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
- 4. " * ", means this data is the worst emission level.
- 5. Measurement Level = Reading Level + Correct Factor.
- The average measurement was not performed when the peak measured data under the limit of average detection. If the readings given are average, peak measurement should also be supplied.



Site : CB4-H	Time : 2017/04/08
Limit : FCC_SpartC_15.209_03M_PK	Margin : 6
Probe : CB4-H_FCC_EFS_B432_1-18GHz_3M_1116 -	Power : AC 120V/60Hz
VERTICAL	
EUT : UHD551-L	Note: Mode 3: Tx_3DH5_2441MHz

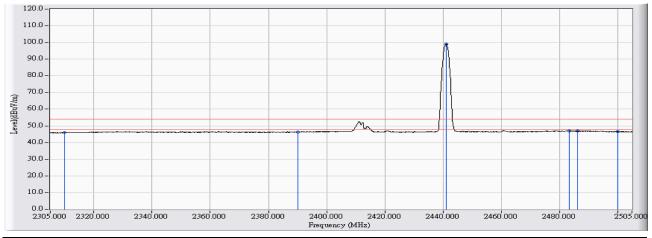


		Frequency	Correct Factor	Reading Level	Measure Level	Margin	Limit	Detector Type
		(MHz)	(dB)	(dBuV)	(dBuV/m)	(dB)	(dBuV/m)	
1		2310.000	-0.502	57.587	57.085	-16.915	74.000	PEAK
2		2390.000	-0.193	57.616	57.423	-16.577	74.000	PEAK
3	*	2441.000	0.004	102.885	102.889	28.889	74.000	PEAK
4		2483.500	0.168	57.618	57.786	-16.214	74.000	PEAK
5		2484.600	0.173	58.864	59.037	-14.963	74.000	PEAK
6		2500.000	0.230	56.838	57.069	-16.931	74.000	PEAK

- All readings above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Peak measurements: RBW = 1MHz, VBW = 1MHz, Sweep: Auto.
- 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
- 4. " * ", means this data is the worst emission level.
- 5. Measurement Level = Reading Level + Correct Factor.
- The average measurement was not performed when the peak measured data under the limit of average detection. If the readings given are average, peak measurement should also be supplied.



Site : CB4-H	Time : 2017/04/08
Limit : FCC_SpartC_15.209_03M_AV	Margin : 6
Probe : CB4-H_FCC_EFS_B432_1-18GHz_3M_1116 -	Power : AC 120V/60Hz
VERTICAL	
EUT : UHD551-L	Note : Mode 3: Tx_3DH5_2441MHz

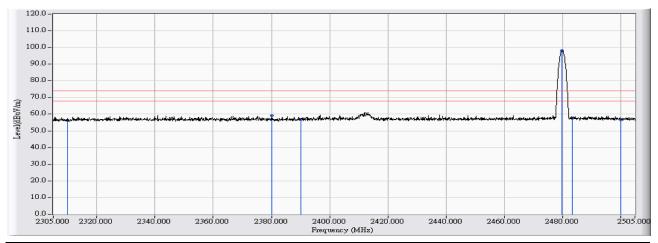


		Frequency	Correct Factor	Reading Level	Measure Level	Margin	Limit	Detector Type
		(MHz)	(dB)	(dBuV)	(dBuV/m)	(dB)	(dBuV/m)	
1		2310.000	-0.502	46.422	45.920	-8.080	54.000	AVERAGE
2		2390.000	-0.193	46.491	46.298	-7.702	54.000	AVERAGE
3	*	2441.100	0.005	98.956	98.961	44.961	54.000	AVERAGE
4		2483.500	0.168	46.699	46.867	-7.133	54.000	AVERAGE
5		2486.300	0.179	46.924	47.103	-6.897	54.000	AVERAGE
6		2500.000	0.230	46.377	46.608	-7.392	54.000	AVERAGE

- All readings above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Peak measurements: RBW = 1MHz, VBW = 1MHz, Sweep: Auto.
- 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
- 4. " * ", means this data is the worst emission level.
- 5. Measurement Level = Reading Level + Correct Factor.
- 6. The average measurement was not performed when the peak measured data under the limit of average detection. If the readings given are average, peak measurement should also be supplied.



Site : CB4-H	Time : 2017/04/08
Limit : FCC_SpartC_15.209_03M_PK	Margin : 6
Probe : CB4-H_FCC_EFS_B432_1-18GHz_3M_1116 -	Power : AC 120V/60Hz
HORIZONTAL	
EUT : UHD551-L	Note: Mode 3: Tx_3DH5_2480MHz

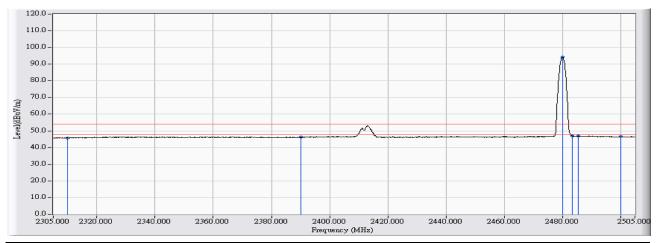


		Frequency	Correct Factor	Reading Level	Measure Level	Margin	Limit	Detector Type
		(MHz)	(dB)	(dBuV)	(dBuV/m)	(dB)	(dBuV/m)	
1		2310.000	-0.502	56.760	56.258	-17.742	74.000	PEAK
2		2380.000	-0.232	59.506	59.274	-14.726	74.000	PEAK
3		2390.000	-0.193	57.069	56.876	-17.124	74.000	PEAK
4	*	2479.900	0.155	98.002	98.156	24.156	74.000	PEAK
5		2483.500	0.168	57.297	57.465	-16.535	74.000	PEAK
6		2500.000	0.230	56.324	56.555	-17.445	74.000	PEAK

- All readings above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Peak measurements: RBW = 1MHz, VBW = 1MHz, Sweep: Auto.
- 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
- 4. " * ", means this data is the worst emission level.
- 5. Measurement Level = Reading Level + Correct Factor.
- 6. The average measurement was not performed when the peak measured data under the limit of average detection. If the readings given are average, peak measurement should also be supplied.



Site : CB4-H	Time : 2017/04/08
Limit : FCC_SpartC_15.209_03M_AV	Margin : 6
Probe : CB4-H_FCC_EFS_B432_1-18GHz_3M_1116 -	Power : AC 120V/60Hz
HORIZONTAL	
EUT : UHD551-L	Note : Mode 3: Tx_3DH5_2480MHz

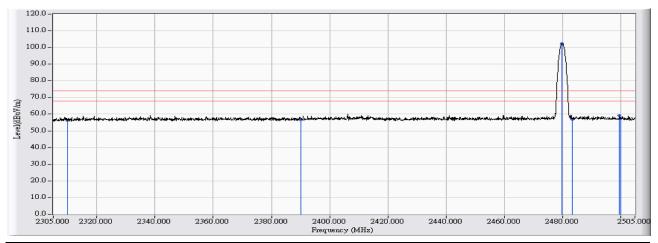


		Frequency	Correct Factor	Reading Level	Measure Level	Margin	Limit	Detector Type
		(MHz)	(dB)	(dBuV)	(dBuV/m)	(dB)	(dBuV/m)	
1		2310.000	-0.502	46.307	45.805	-8.195	54.000	AVERAGE
2		2390.000	-0.193	46.458	46.265	-7.735	54.000	AVERAGE
3	*	2480.100	0.155	94.138	94.293	40.293	54.000	AVERAGE
4		2483.500	0.168	46.760	46.928	-7.072	54.000	AVERAGE
5		2485.600	0.176	46.906	47.083	-6.917	54.000	AVERAGE
6		2500.000	0.230	46.531	46.762	-7.238	54.000	AVERAGE

- All readings above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Peak measurements: RBW = 1MHz, VBW = 1MHz, Sweep: Auto.
- 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
- 4. " * ", means this data is the worst emission level.
- 5. Measurement Level = Reading Level + Correct Factor.
- The average measurement was not performed when the peak measured data under the limit of average detection. If the readings given are average, peak measurement should also be supplied.



Site : CB4-H	Time : 2017/04/08
Limit : FCC_SpartC_15.209_03M_PK	Margin : 6
Probe : CB4-H_FCC_EFS_B432_1-18GHz_3M_1116 -	Power : AC 120V/60Hz
VERTICAL	
EUT : UHD551-L	Note : Mode 3: Tx_3DH5_2480MHz

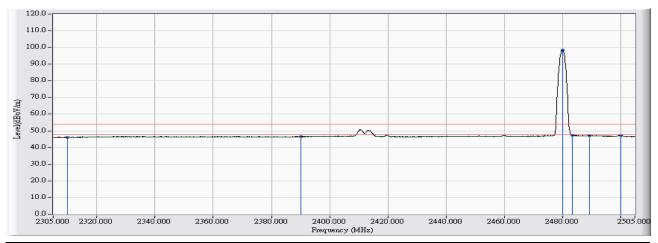


		Frequency	Correct Factor	Reading Level	Measure Level	Margin	Limit	Detector Type
		(MHz)	(dB)	(dBuV)	(dBuV/m)	(dB)	(dBuV/m)	
1		2310.000	-0.502	56.676	56.174	-17.826	74.000	PEAK
2		2390.000	-0.193	56.907	56.714	-17.286	74.000	PEAK
3	*	2479.900	0.155	102.291	102.445	28.445	74.000	PEAK
4		2483.500	0.168	56.934	57.102	-16.898	74.000	PEAK
5		2499.700	0.230	59.054	59.284	-14.716	74.000	PEAK
6		2500.000	0.230	57.469	57.700	-16.300	74.000	PEAK

- All readings above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Peak measurements: RBW = 1MHz, VBW = 1MHz, Sweep: Auto.
- 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
- 4. " * ", means this data is the worst emission level.
- 5. Measurement Level = Reading Level + Correct Factor.
- 6. The average measurement was not performed when the peak measured data under the limit of average detection. If the readings given are average, peak measurement should also be supplied.



Site : CB4-H	Time : 2017/04/08
Limit : FCC_SpartC_15.209_03M_AV	Margin : 6
Probe : CB4-H_FCC_EFS_B432_1-18GHz_3M_1116 -	Power : AC 120V/60Hz
VERTICAL	
EUT : UHD551-L	Note : Mode 3: Tx_3DH5_2480MHz



		Frequency	Correct Factor	Reading Level	Measure Level	Margin	Limit	Detector Type
		(MHz)	(dB)	(dBuV)	(dBuV/m)	(dB)	(dBuV/m)	
1		2310.000	-0.502	46.605	46.103	-7.897	54.000	AVERAGE
2		2390.000	-0.193	46.689	46.496	-7.504	54.000	AVERAGE
3	*	2480.100	0.155	98.426	98.581	44.581	54.000	AVERAGE
4		2483.500	0.168	47.039	47.207	-6.793	54.000	AVERAGE
5		2489.300	0.190	47.160	47.351	-6.649	54.000	AVERAGE
6		2500.000	0.230	46.992	47.223	-6.777	54.000	AVERAGE

- All readings above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Peak measurements: RBW = 1MHz, VBW = 1MHz, Sweep: Auto.
- 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
- 4. " * ", means this data is the worst emission level.
- 5. Measurement Level = Reading Level + Correct Factor.
- The average measurement was not performed when the peak measured data under the limit of average detection. If the readings given are average, peak measurement should also be supplied.



7. Number of hopping frequency

7.1. Test Equipment

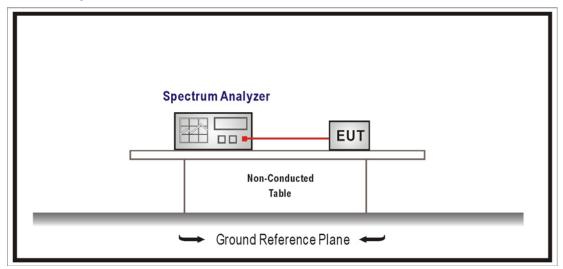
The following test equipment is used during the test:

Number of hopping frequency / SR10-H

Instrument	Manufacturer	Model No.	Serial No	Next Cal. Date
Spectrum Analyzer	Agilent	N9010A	US47140172	2017/08/08

Note: All equipments that need to calibrate are with calibration period of 1 year.

7.2. Test Setup



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7.3. Limits

For frequency hopping systems operating in the 902-928 MHz band: if the 20 dB bandwidth of the hopping channel is less than 250 kHz, the system shall use at least 50 hopping frequencies and the average time of occupancy on any frequency shall not be greater than 0.4 seconds within a 20 second period; if the 20 dB bandwidth of the hopping channel is 250 kHz or greater, the system shall use at least 25 hopping frequencies and the average time of occupancy on any frequency shall not be greater than 0.4 seconds within a 10 second period. The maximum allowed 20 dB bandwidth of the hopping channel is 500 kHz.

For frequency hopping systems operating in the 2400-2483.5 MHz bands, which use fewer than 75 hopping frequencies, may employ intelligent hopping techniques to avoid interference to other transmissions. Frequency hopping systems may avoid or suppress transmissions on a particular hopping frequency provided that a minimum of 15 non-overlapping channels are used.

For frequency hopping systems operating in the 5725-5850 MHz band shall use at least 75 hopping frequencies.

7.4. Test Procedures

The EUT was setup according to ANSI C63.10: 2013 and tested according to FHSS test procedure of FCC Public Notice DA 00-705 for compliance to FCC 47CFR 15.247 requirements,

Span = the frequency band of operation ,RBW \geq 1% of the span, VBW \geq RBW, Sweep = auto, Detector function = peak, Trace = max hold.

7.5. Test Specification

According to FCC Part 15 Subpart C Paragraph 15.247: 2015

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7.6. Test Result

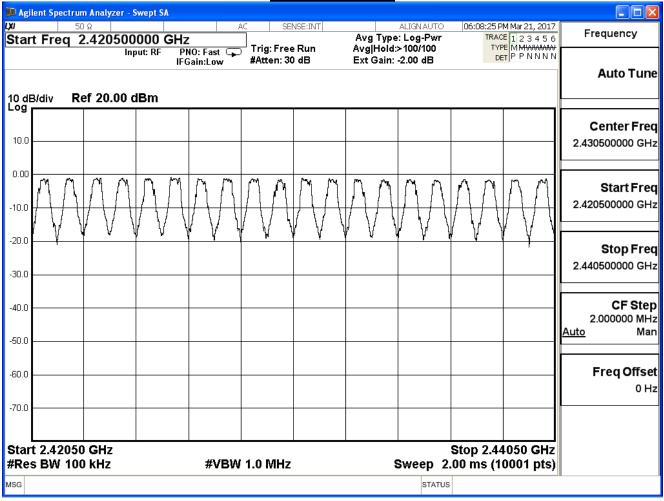
Product	UHD551-L		
Test Item	Number of hopping frequency		
Test Mode	Mode 1: Tx_DH5		
Date of Test	2017/03/21	Test Site	SR10-H

Frequency Range	Measure Level	Limit	Result
(MHz)	(Channels)	(Channels)	
2402 - 2480	79	≥ 75	Pass

2401.5-2420.5MHz 💴 Agilent Spectrum Analyzer - Swept SA 06:05:44 PM Mar 21, 2017 Avg Type: Log-Pwr Avg|Hold:>100/100 Frequency TRACE 1 23456 TYPE MMWWWW DET PPNNNN Start Freq 2.401500000 GHz Trig: Free Run PNO: Fast 😱 IFGain:Low Input: RF Ext Gain: -2.00 dB #Atten: 30 dB Auto Tune 10 dB/div Log Ref 20.00 dBm Center Freq 10.0 2.411000000 GHz 0.00 Start Freq 2.401500000 GHz -10.0 -20.0 Stop Freq 2.420500000 GHz -30.0 **CF Step** -40.0 1.900000 MHz Man <u>Auto</u> -50.0 Freq Offset -60.0 0 Hz -70.0 Start 2.401500 GHz Stop 2.420500 GHz #Res BW 100 kHz **#VBW 1.0 MHz** Sweep 2.00 ms (10001 pts) STATUS

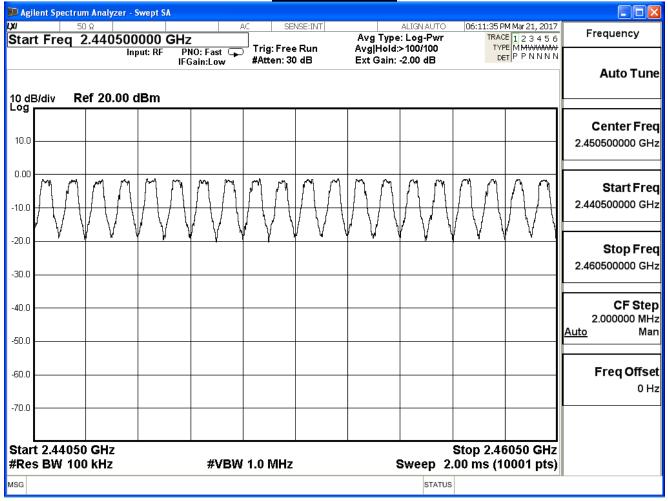


2420.5-2440.5MHz



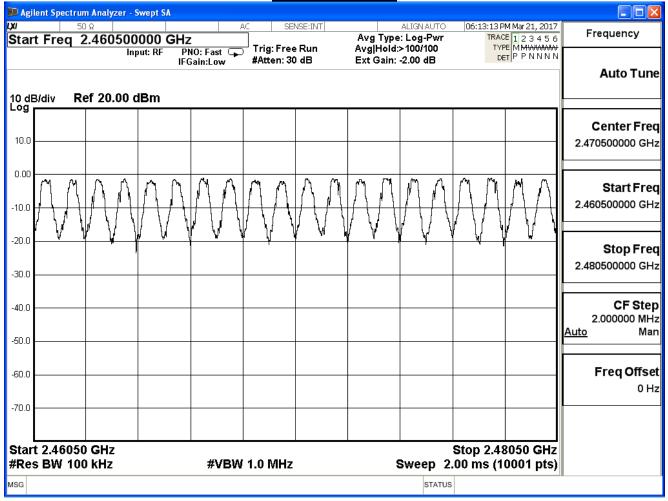


2440.5-2460.5MHz





2460.5-2480.5MHz





8. Carrier Frequency Separation

8.1. Test Equipment

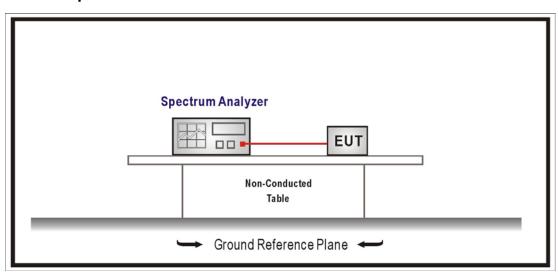
The following test equipment is used during the test:

Carrier Frequency Separation / SR10-H

Instrument	Manufacturer	Model No.	Serial No	Next Cal. Date
Spectrum Analyzer	Agilent	N9010A	US47140172	2017/08/08

Note: All equipments that need to calibrate are with calibration period of 1 year.

8.2. Test Setup



8.3. Limits

For frequency hopping systems shall have hopping channel carrier frequencies separated by a minimum of 25 kHz or two-thirds of the 20 dB bandwidth of the hopping channel, whichever is greater.

8.4. Test Procedures

The EUT was setup according to ANSI C63.10: 2013 and tested according to FHSS test procedure of FCC Public Notice DA 00-705 for compliance to FCC 47CFR 15.247 requirements

Span = wide enough to capture the peaks of two adjacent channels Resolution Bandwidth (RBW) ≥ 1% of the span, VBW ≥ RBW Sweep = auto, Detector function = peak, Trace = max hold

8.5. Test Specification

According to FCC Part 15 Subpart C Paragraph 15.247: 2015

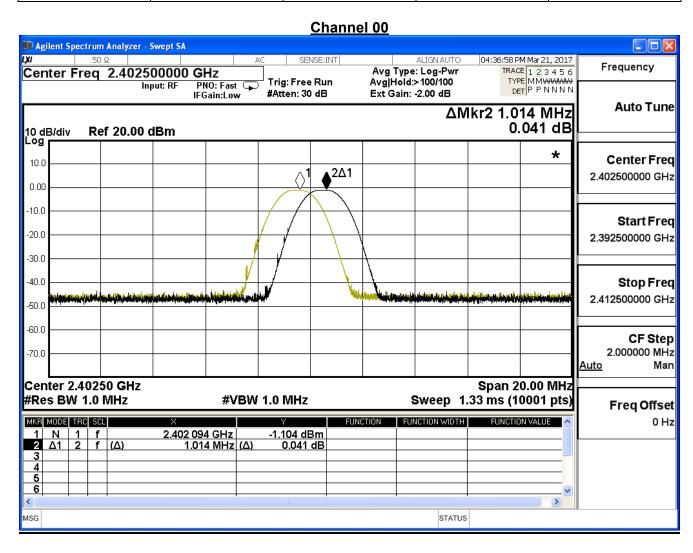


8.6. Test Result

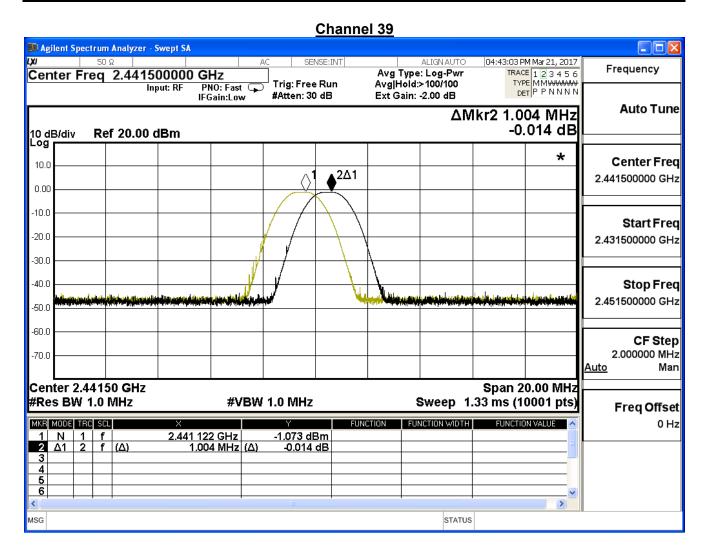
Product	UHD551-L		
Test Item	Carrier Frequency Separation		
Test Mode	Mode 1: Tx_DH5		
Date of Test	2017/03/21	Test Site	SR10-H

GFSK

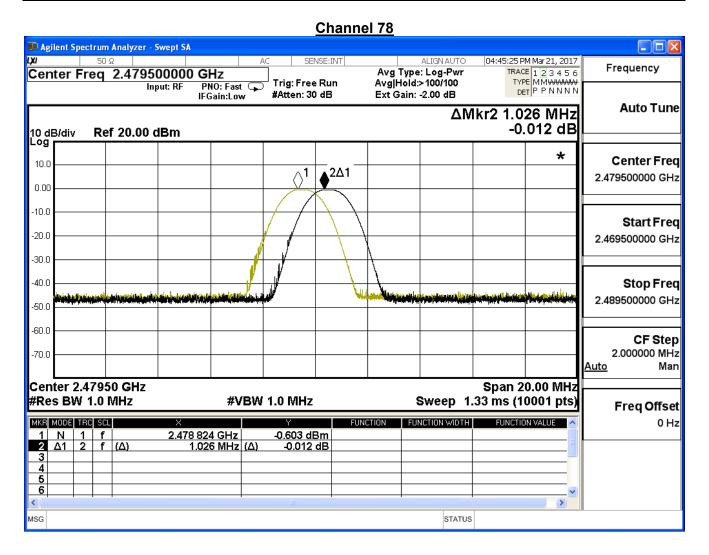
Channel No.	Frequency (MHz)	Measure Level (MHz)	Limit (MHz)	Result
00	2402	1.014	0.738	Pass
39	2441	1.004	0.739	Pass
78	2480	1.026	0.738	Pass









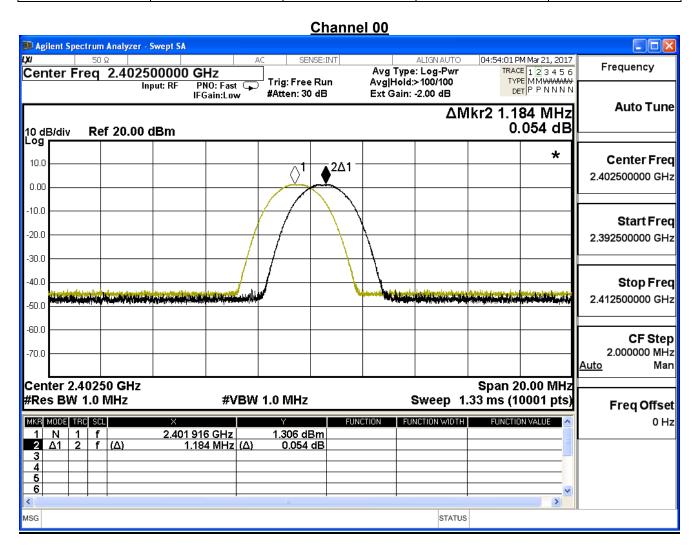




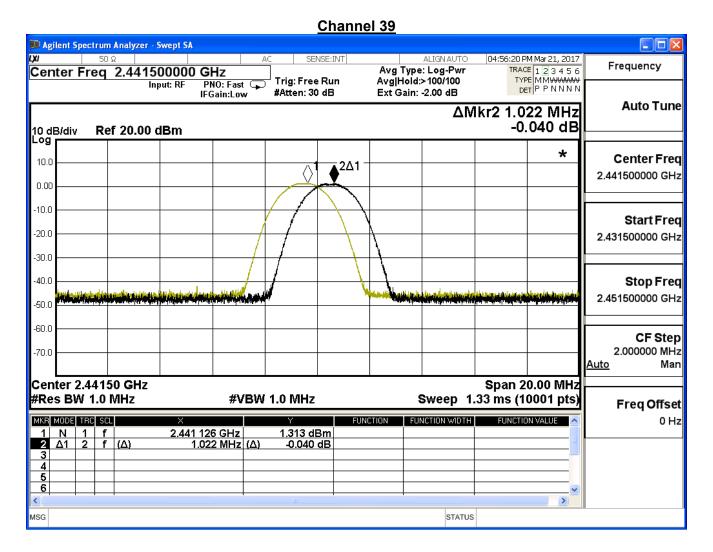
Product	UHD551-L		
Test Item	Carrier Frequency Separation		
Test Mode	Mode 2: Tx_2DH5		
Date of Test	2017/03/21	Test Site	SR10-H

π/4-DQPSK

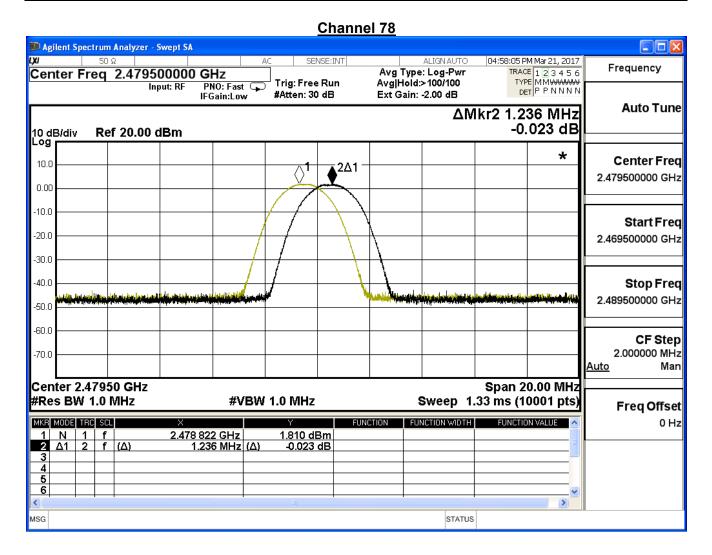
Ī	Channel No.	Frequency	Measure Level	Limit	Result
	Onamior ivo.	(MHz)	(MHz)	(MHz)	rtodan
	00	2402	1.184	0.926	Pass
	39	2441	1.022	0.929	Pass
Ī	78	2480	1.236	0.927	Pass









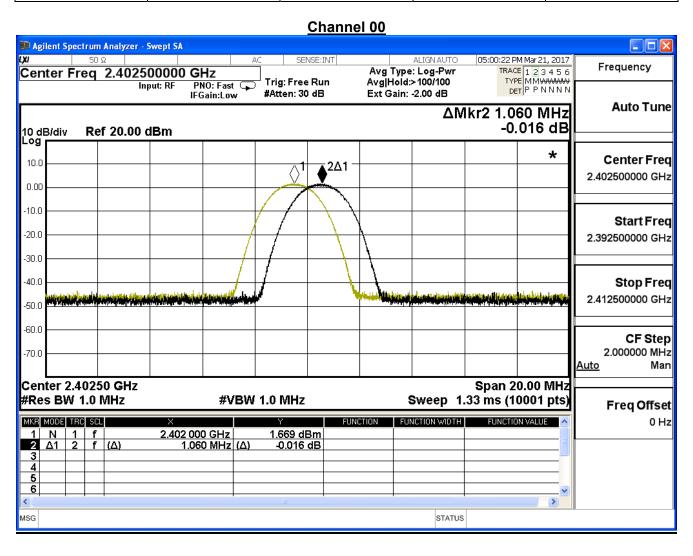




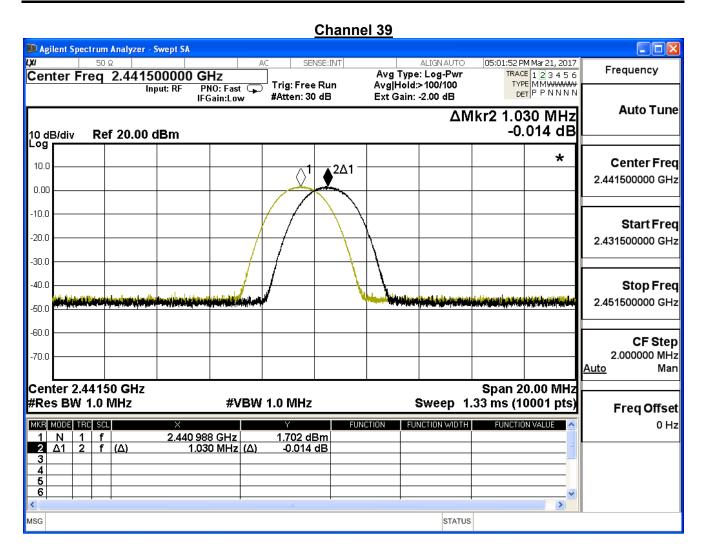
Product	UHD551-L		
Test Item	Carrier Frequency Separation		
Test Mode	Mode 3: Tx_3DH5		
Date of Test	2017/03/21	Test Site	SR10-H

8-DPSK

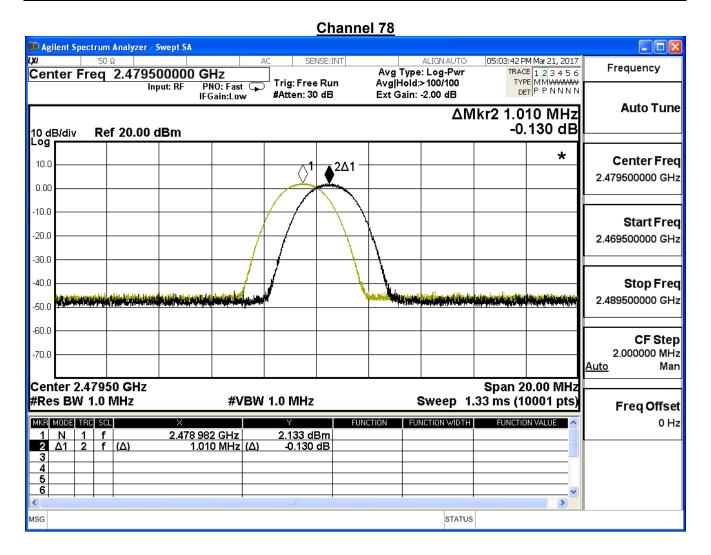
Channel No.	Frequency (MHz)	Measure Level (MHz)	Limit (MHz)	Result
00	2402	1.060	0.926	Pass
39	2441	1.030	0.926	Pass
78	2480	1.010	0.927	Pass













9. Occupied Bandwidth

9.1. Test Equipment

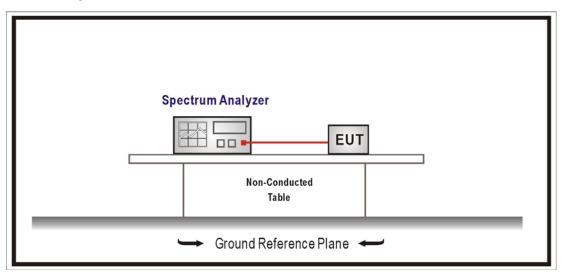
The following test equipment is used during the test:

Occupied Bandwidth / SR10-H

Instrument	Manufacturer	Model No.	Serial No	Next Cal. Date
Spectrum Analyzer	Agilent	N9010A	US47140172	2017/08/08

Note: All equipments that need to calibrate are with calibration period of 1 year.

9.2. Test Setup



9.3. Limits

For frequency hopping systems operating in the 902-928 MHz band: if the 20 dB bandwidth of the hopping channel is less than 250 kHz, the system shall use at least 50 hopping frequencies and the average time of occupancy on any frequency shall not be greater than 0.4 seconds within a 20 second period; if the 20 dB bandwidth of the hopping channel is 250 kHz or greater, the system shall use at least 25 hopping frequencies and the average time of occupancy on any frequency shall not be greater than 0.4 seconds within a 10 second period. The maximum allowed 20 dB bandwidth of the hopping channel is 500 kHz.

For frequency hopping systems operating in the 5725-5850 MHz bands. The maximum 20 dB bandwidth of the hopping channel is 1 MHz.

For frequency hopping systems shall have hopping channel carrier frequencies separated by a minimum of 25 kHz or the 20 dB bandwidth of the hopping channel, whichever is greater.

Report No: 1740037R-RFUSP27V00



9.4. Test Procedures

The EUT was setup according to ANSI C63.10: 2013 and tested according to FHSS test procedure of FCC Public Notice DA 00-705 for compliance to FCC 47CFR 15.247 requirements

Use the following spectrum analyzer settings:

Span = approximately 2 to 3 times the 20 dB bandwidth, centered on a hopping channel RBW \geq 1% of the 20 dB bandwidth, VBW \geq RBW , Sweep = auto, Detector function = peak, Trace = max hold , The EUT should be transmitting at its maximum data rate.

9.5. Test Specification

According to FCC Part 15 Subpart C Paragraph 15.247: 2015

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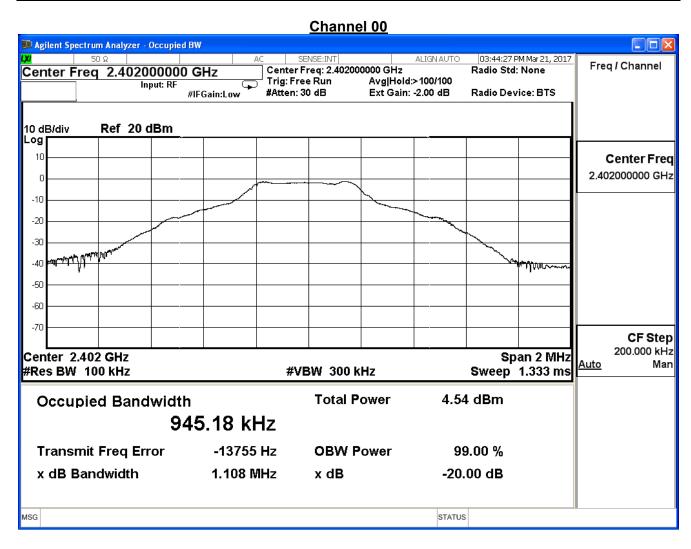


9.6. Test Result

Product	UHD551-L		
Test Item	Occupied Bandwidth		
Test Mode	Mode 1: Tx_DH5		
Date of Test	2017/03/21	Test Site	SR10-H

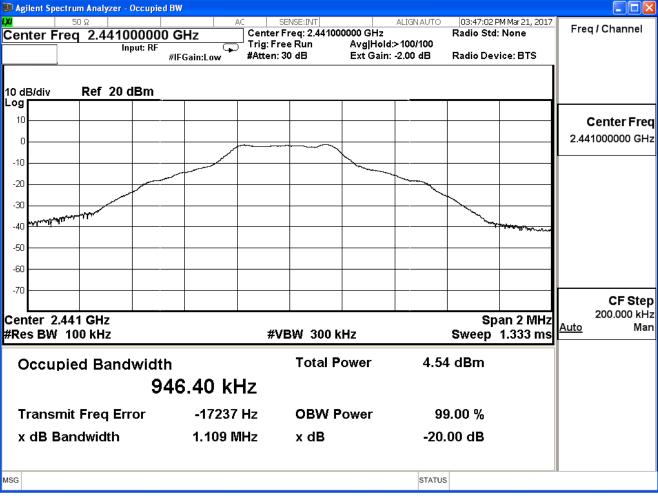
GFSK

Channel No.	Frequency	Measure Level	Limit	Result
	(MHz)	(MHz)	(MHz)	
00	2402	1.108		Pass
39	2441	1.109		Pass
78	2480	1.108		Pass









Transmit Freq Error

x dB Bandwidth

MSG

-16397 Hz

1.108 MHz



Channel 78 💴 Agilent Spectrum Analyzer - Occupied BW 03:55:08 PM Mar 21, 2017 Center Freq 2.480000000 GHz Freq I Channel Center Freq: 2.480000000 GHz Radio Std: None Trig: Free Run Avg|Hold:>100/100 Input: RF #Atten: 30 dB Ext Gain: -2.00 dB #IFGain:Low Radio Device: BTS Ref 20 dBm 10 dB/div Log 10 Center Freq 2.480000000 GHz -10 -20 -30 -40 -50 -60 -70 CF Step 200.000 kHz Center 2.48 GHz Span 2 MHz <u>Auto</u> Man #Res BW 100 kHz **#VBW** 300 kHz Sweep 1.333 ms **Total Power** 5.13 dBm **Occupied Bandwidth** 944.53 kHz

OBW Power

x dB

99.00 %

-20.00 dB

STATUS

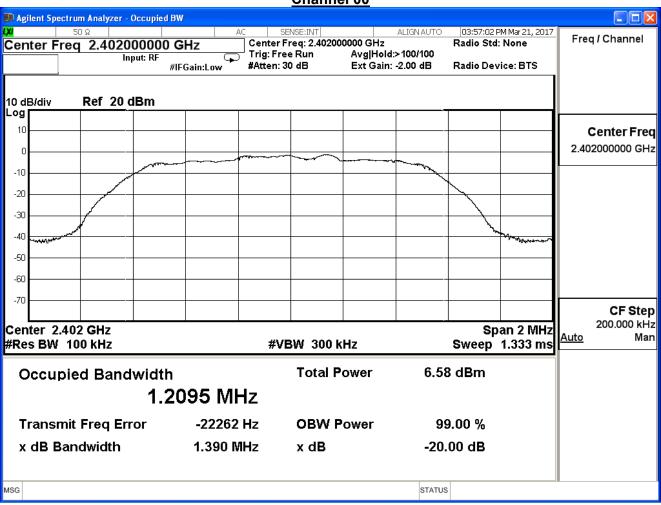


Product	UHD551-L		
Test Item	Occupied Bandwidth		
Test Mode	Mode 2: Tx_2DH5		
Date of Test	2017/03/21	Test Site	SR10-H

π/4-DQPSK

Channel No.	Frequency (MHz)	Measure Level (MHz)	Limit (MHz)	Result
00	2402	1.390		Pass
39	2441	1.394		Pass
78	2480	1.391		Pass

Channel 00



Input: RF

Ref 20 dBm

💴 Agilent Spectrum Analyzer - Occupied BW

10 dB/div Log 10

> -10 -20 -30 -40 -50 -60 -70

MSG

Center 2.441 GHz

#Res BW 100 kHz



CF Step 200.000 kHz

Man

Span 2 MHz

Sweep 1.333 ms

<u>Auto</u>

Channel 39 04:06:00 PM Mar 21, 2017 Center Freq 2.441000000 GHz Freq I Channel Center Freq: 2.441000000 GHz Radio Std: None Trig: Free Run Avg|Hold:>100/100 Ext Gain: -2.00 dB #IFGain:Low #Atten: 30 dB Radio Device: BTS Center Freq 2.441000000 GHz

STATUS

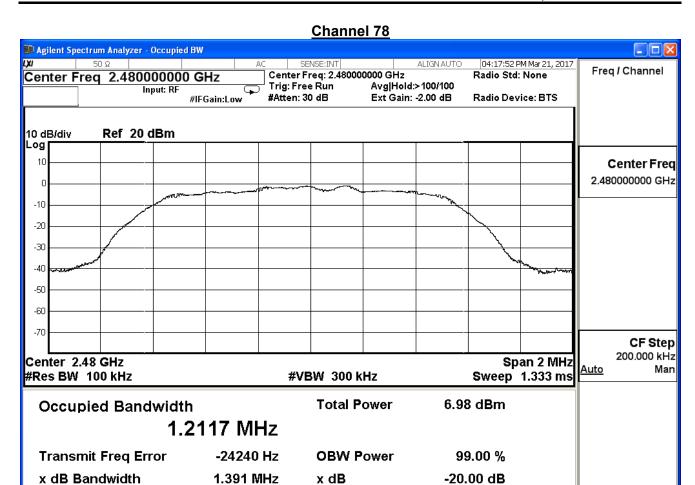
Total Power 6.43 dBm **Occupied Bandwidth** 1.2113 MHz **Transmit Freq Error** -21112 Hz **OBW Power** 99.00 % x dB Bandwidth 1.394 MHz x dB -20.00 dB

#VBW 300 kHz

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MSG





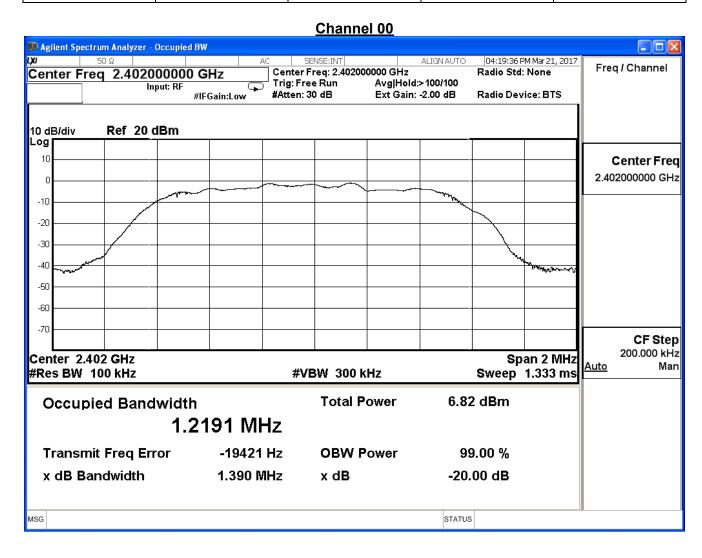
STATUS



Product	UHD551-L		
Test Item	Occupied Bandwidth		
Test Mode	Mode 3: Tx_3DH5		
Date of Test	2017/03/21	Test Site	SR10-H

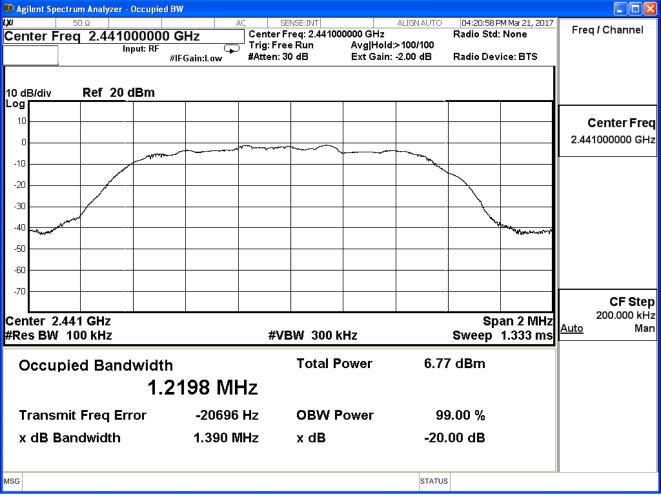
8-DPSK

Channel No.	Frequency (MHz)	Measure Level (MHz)	Limit (MHz)	Result
00	2402	1.390		Pass
39	2441	1.390		Pass
78	2480	1.391		Pass









Input: RF

Ref 20 dBm

💴 Agilent Spectrum Analyzer - Occupied BW

10 dB/div Log 10

> -10 -20 -30 -40 -50 -60 -70

MSG

Center 2.48 GHz

#Res BW 100 kHz



CF Step 200.000 kHz

Man

Span 2 MHz

Sweep 1.333 ms

<u>Auto</u>

Channel 78 04:23:22 PM Mar 21, 2017 Center Freq 2.480000000 GHz Freq I Channel Center Freq: 2.480000000 GHz Radio Std: None Trig: Free Run Avg|Hold:>100/100 #Atten: 30 dB Ext Gain: -2.00 dB #IFGain:Low Radio Device: BTS Center Freq 2.480000000 GHz

STATUS

Total Power 7.26 dBm **Occupied Bandwidth** 1.2191 MHz **Transmit Freq Error** -21370 Hz **OBW Power** 99.00 % x dB Bandwidth 1.391 MHz x dB -20.00 dB

#VBW 300 kHz



10. Dwell Time

10.1. Test Equipment

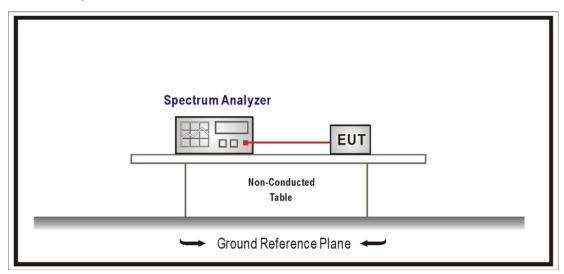
The following test equipment is used during the test:

Dwell Time / SR10-H

Instrument	Manufacturer	Model No.	Serial No	Next Cal. Date
Spectrum Analyzer	Agilent	N9010A	US47140172	2017/08/08

Note: All equipments that need to calibrate are with calibration period of 1 year.

10.2. Test Setup



10.3. Limits

For frequency hopping systems operating in the 902-928 MHz band: if the 20 dB bandwidth of the hopping channel is less than 250 kHz, the system shall use at least 50 hopping frequencies and the average time of occupancy on any frequency shall not be greater than 0.4 seconds within a 20 second period; if the 20 dB bandwidth of the hopping channel is 250 kHz or greater, the system shall use at least 25 hopping frequencies and the average time of occupancy on any frequency shall not be greater than 0.4 seconds within a 10 second period. For frequency hopping systems operating in the 2400-2483.5 MHz bands. The average time of occupancy on any channel shall not be greater than 0.4 seconds within a period of 0.4 seconds multiplied by the number of hopping channels employed.

For frequency hopping systems operating in the 5725-5850 MHz bands. The average time of occupancy on any frequency shall not be greater than 0.4 seconds within a 30 second period.

Report No: 1740037R-RFUSP27V00



10.4. Test Procedures

The EUT was setup according to ANSI C63.10: 2013 and tested according to FHSS test procedure of FCC Public Notice DA 00-705 for compliance to FCC 47CFR 15.247 requirements

Span = zero span, centered on a hopping channel, RBW = 1 MHz, VBW ≥ RBW, Sweep = as necessary to capture the entire dwell time per hopping channel, Detector function = peak, Trace = max hold.

10.5. Test Specification

According to FCC Part 15 Subpart C Paragraph 15.247: 2015

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10.6. Test Result

Product	UHD551-L		
Test Item	Dwell Time		
Test Mode	Mode 1: Tx_DH5		
Date of Test	2017/03/21	Test Site	SR10-H

GFSK

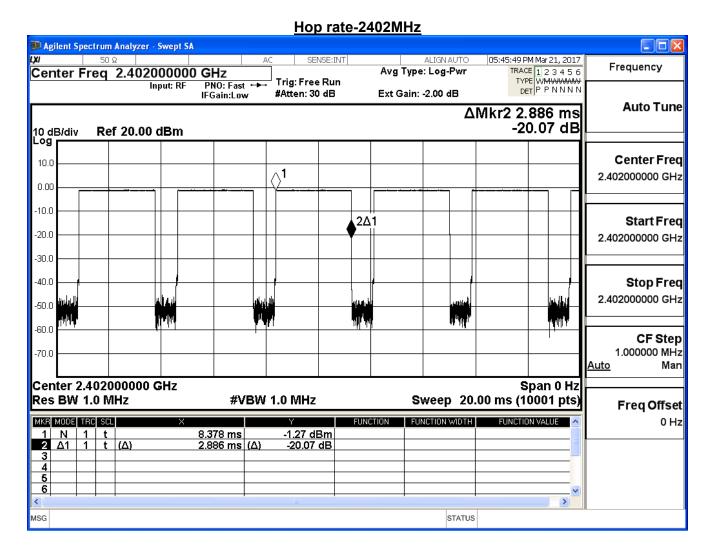
Occupancy Time of Frequency Hopping System

- A) 2402MHz Test Time Period: 0.4*79=31.60sec, Time slot length: $\underline{2.886}$ ms = $\underline{0.002886}$ sec Dwell Time: $\underline{0.002886}$ *(266.67/79)* 31.60= $\underline{0.3078}$ sec
- B) 2441MHz Test Time Period: 0.4*79=31.60sec, Time slot length: 2.888 embeds ms = 0.002888 embeds sec Dwell Time: 0.002888 embeds *(266.67/79)* 31.60= 0.3081 embeds sec
- C) 2480MHz Test Time Period: 0.4*79=31.60sec, Time slot length: $\underline{2.888}$ ms = $\underline{0.002888}$ sec Dwell Time: $\underline{0.002888}$ *(266.67/79)* 31.60= $\underline{0.3081}$ sec

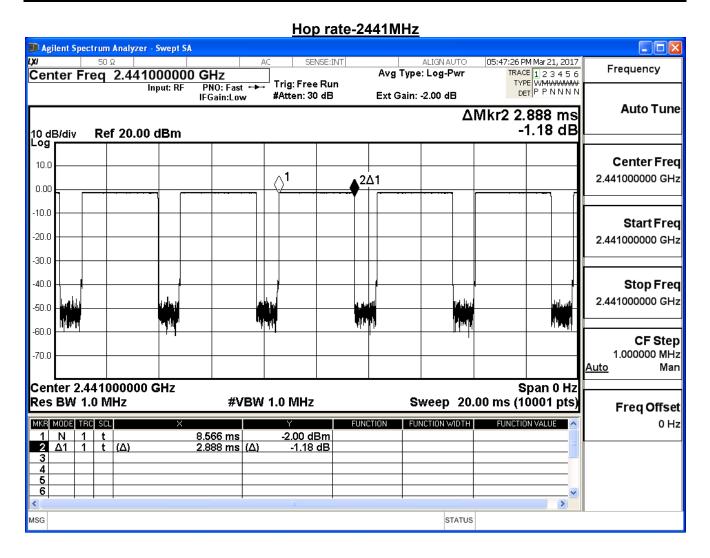
Test Result: The Average Occupancy Time of Each Highest $\,^{,}$ Middle and Lowest Channel Is Less Than 0.4sec $\,^{,}$ And Corresponds to The Standard $\,^{,}$

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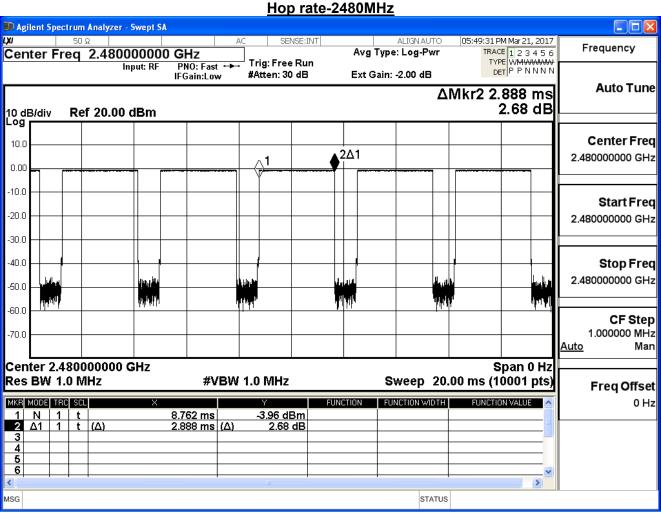












Note: Dwell time=time slot length * hop rate / number of hopping channels * period



Product	UHD551-L		
Test Item	Dwell Time		
Test Mode	Mode 2: Tx_2DH5		
Date of Test	2017/03/21	Test Site	SR10-H

π/4-DQPSK

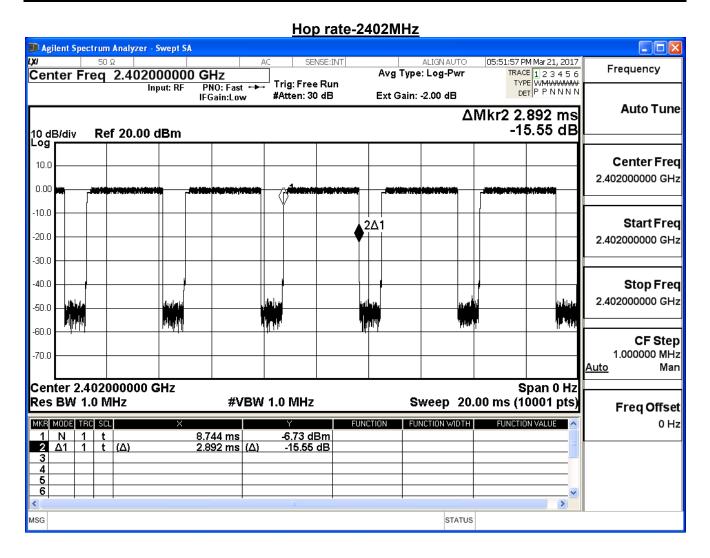
Occupancy Time of Frequency Hopping System

- A) 2402MHz Test Time Period: 0.4*79=31.60sec, Time slot length: $\underline{2.892}$ ms = $\underline{0.002892}$ sec Dwell Time: $\underline{0.002892}*(266.67/79)*31.60=\underline{0.3085}$ sec
- B) 2441MHz Test Time Period: 0.4*79=31.60 sec, Time slot length: $\underline{2.890} \text{ ms} = \underline{0.002890} \text{ sec}$ Dwell Time: $\underline{0.002890}*(266.67/79)*31.60=\underline{0.3083} \text{ sec}$
- C) 2480MHz Test Time Period: 0.4*79=31.60sec, Time slot length: $\underline{2.890}$ ms = $\underline{0.002890}$ sec Dwell Time: $\underline{0.002890}*(266.67/79)*31.60=\underline{0.3083}$ sec

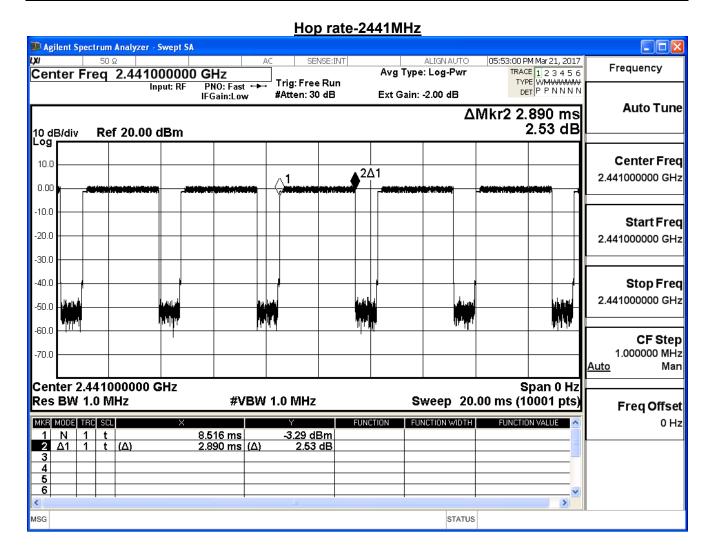
Test Result: The Average Occupancy Time of Each Highest $\,^{,}$ Middle and Lowest Channel Is Less Than 0.4sec $\,^{,}$ And Corresponds to The Standard $\,^{,}$

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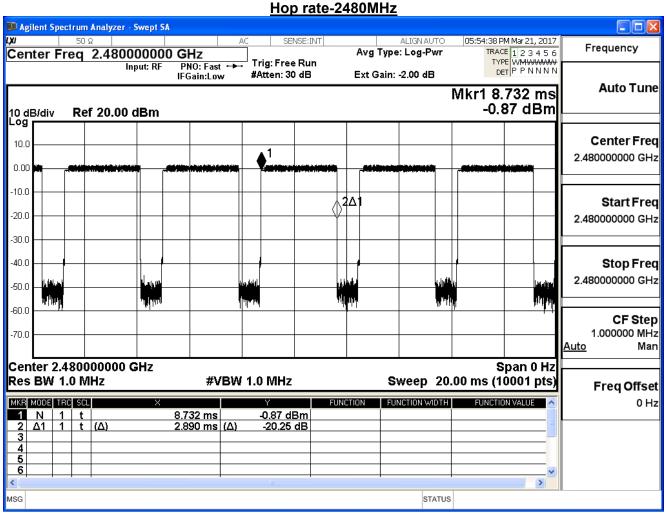












Note: Dwell time=time slot length * hop rate / number of hopping channels * period



Product	UHD551-L		
Test Item	Dwell Time		
Test Mode	Mode 3: Tx_3DH5		
Date of Test	2017/03/21	Test Site	SR10-H

8-DPSK

Occupancy Time of Frequency Hopping System

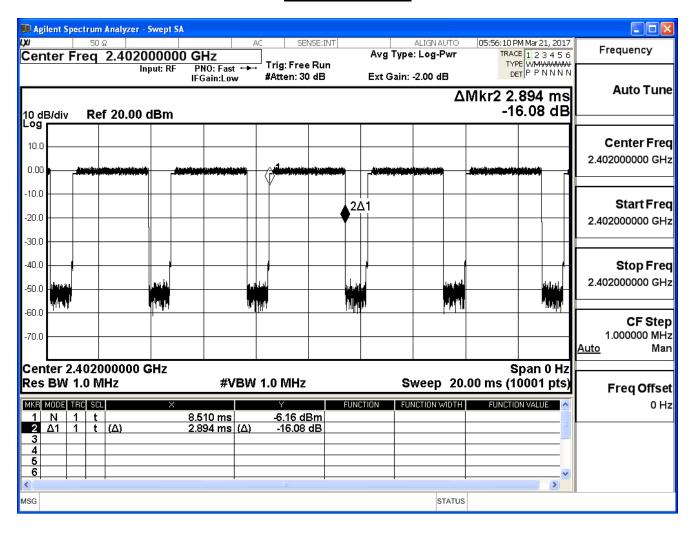
- A) 2402MHz Test Time Period: 0.4*79=31.60sec, Time slot length: $2.894ms = \underline{0.002894}$ sec Dwell Time: $\underline{0.002894}*(266.67/79)*31.60=\underline{0.3087}$ sec
- B) 2441MHz Test Time Period: 0.4*79=31.60sec, Time slot length: $2.894 ms = \underline{0.002894} sec$ Dwell Time: $\underline{0.002894}*(266.67/79)*31.60=\underline{0.3087} sec$
- C) 2480MHz Test Time Period: 0.4*79=31.60sec, Time slot length: $2.894 ms = \underline{0.002894} sec$ Dwell Time: $\underline{0.002894}*(266.67/79)*31.60=\underline{0.3087} sec$

Test Result: The Average Occupancy Time of Each Highest $\,^{,}$ Middle and Lowest Channel Is Less Than 0.4sec $\,^{,}$ And Corresponds to The Standard $\,^{,}$

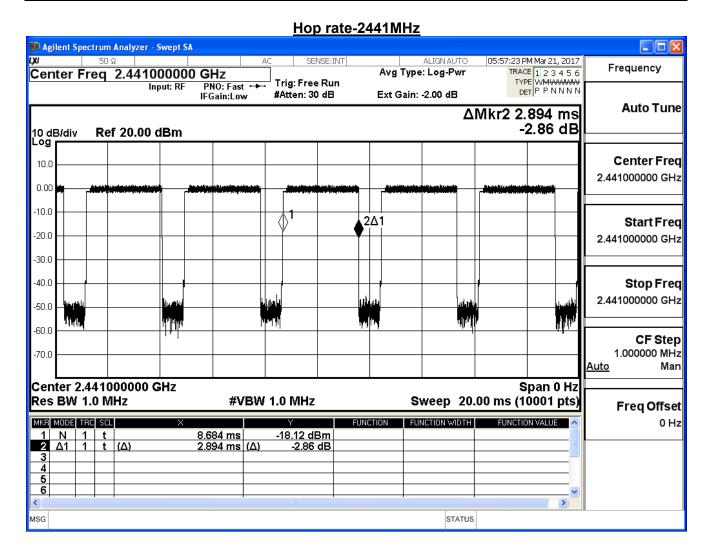
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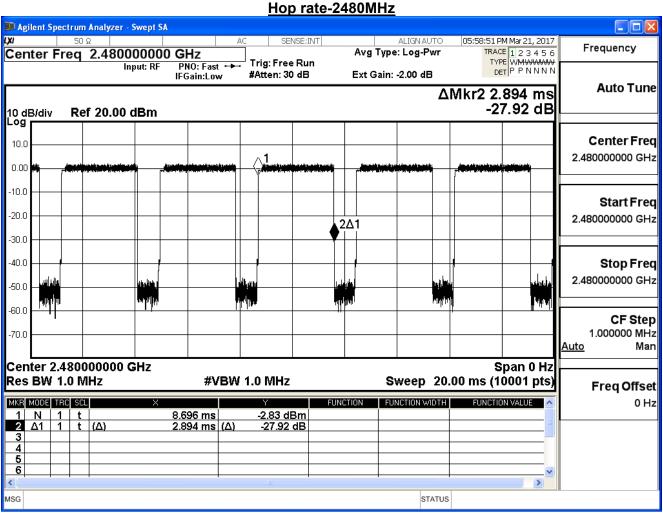
Hop rate-2402MHz











Note: Dwell time=time slot length * hop rate / number of hopping channels * period



Attachment 1

> Test Setup Photograph

<Conducted Emission>

Test Mode : Mode 3: Tx_3DH5

Description: Front View of Conducted Emission Test Setup



Test Mode : Mode 3: Tx_3DH5

Description: Back View of Conducted Emission Test Setup



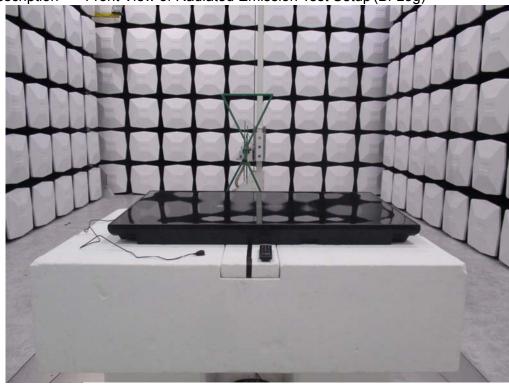
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<Radiated Emission>

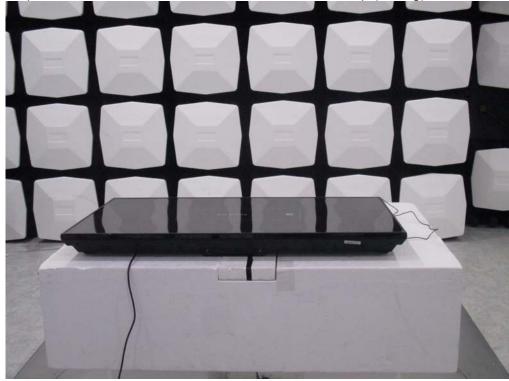
Test Mode : Mode 1: Tx_DH5

Description: Front View of Radiated Emission Test Setup (Bi-Log)



Test Mode : Mode 1: Tx_DH5

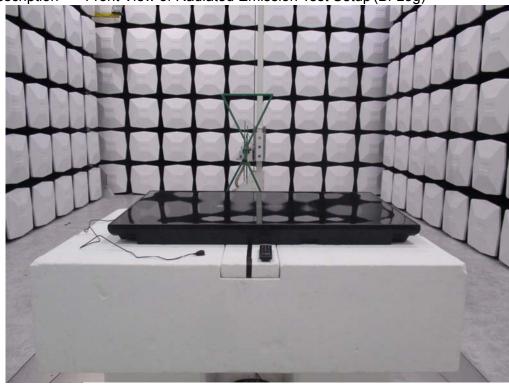






Test Mode : Mode 2: Tx_2DH5

Description: Front View of Radiated Emission Test Setup (Bi-Log)



Test Mode : Mode 2: Tx_2DH5

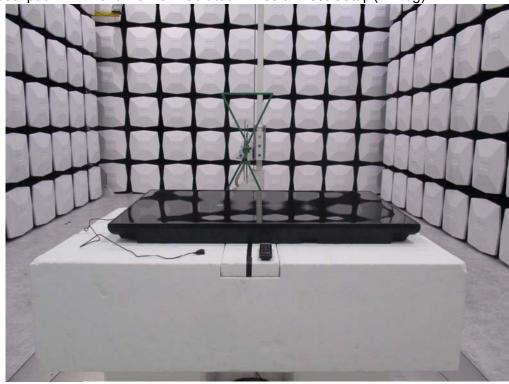






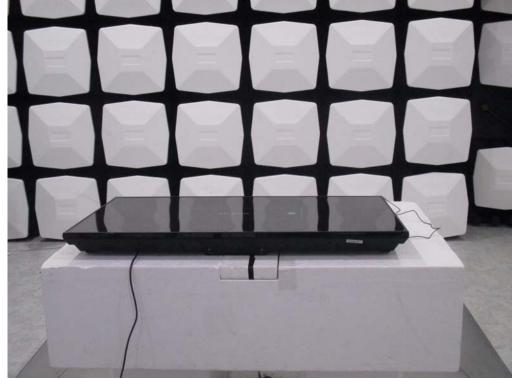
Test Mode : Mode 3: Tx_3DH5

Description: Front View of Radiated Emission Test Setup (Bi-Log)



Test Mode : Mode 3: Tx_3DH5

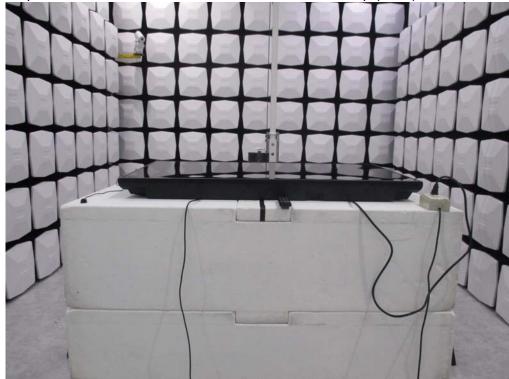






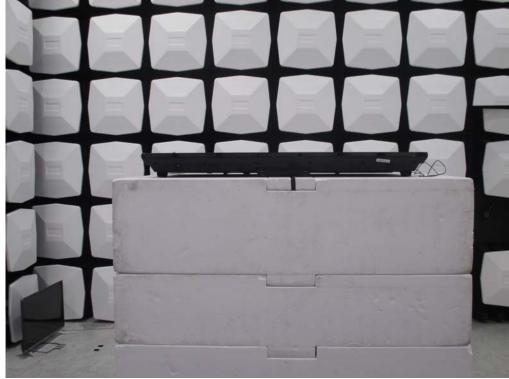
Test Mode : Mode 1: Tx_DH5

Description: Front View of Radiated Emission Test Setup (Horn)



Test Mode : Mode 1: Tx_DH5

Description: Back View of Radiated Emission Test Setup (Horn)





Test Mode : Mode 2: Tx_2DH5

Description: Front View of Radiated Emission Test Setup (Horn)



Test Mode : Mode 2: Tx_2DH5

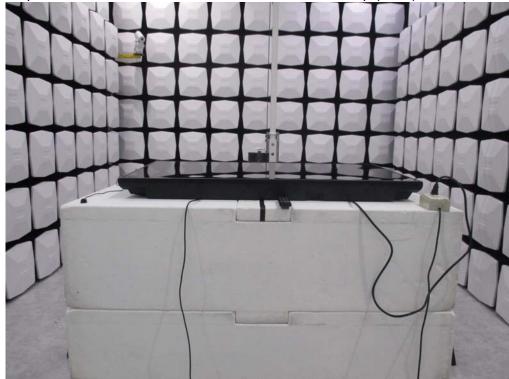






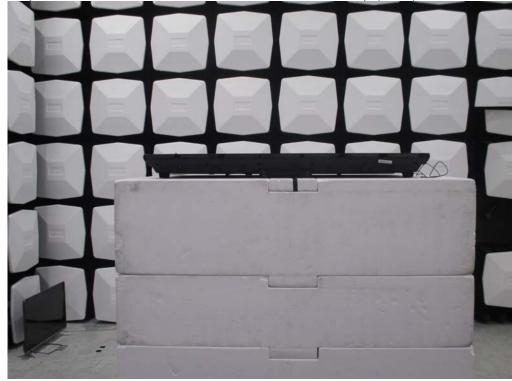
Test Mode : Mode 3: Tx_3DH5

Description: Front View of Radiated Emission Test Setup (Horn)



Test Mode : Mode 3: Tx_3DH5

Description: Back View of Radiated Emission Test Setup (Horn)





Attachment 2

> EUT External Photograph

(1) EUT Photo



(2) EUT Photo





(3) EUT Photo



(4) EUT Photo





(5) EUT Photo



(6) EUT Photo





(7) EUT Photo

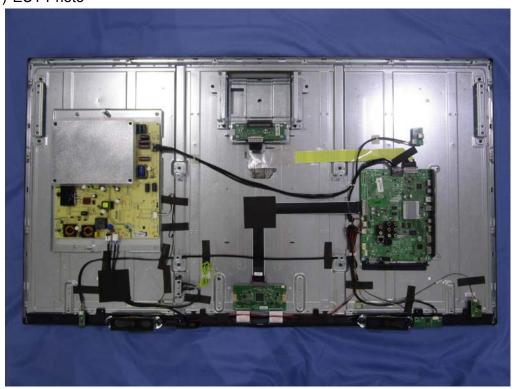




Attachment 3

> EUT Internal Photograph

(1) EUT Photo

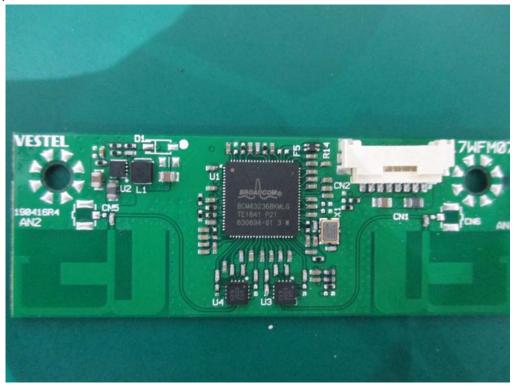








(3) EUT Photo

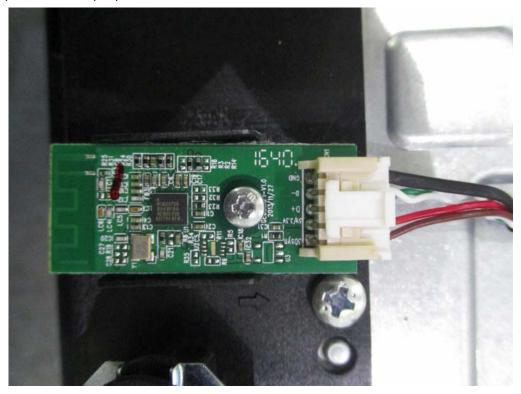


(4) EUT Photo





(5) EUT Photo (BT)



(6) EUT Photo



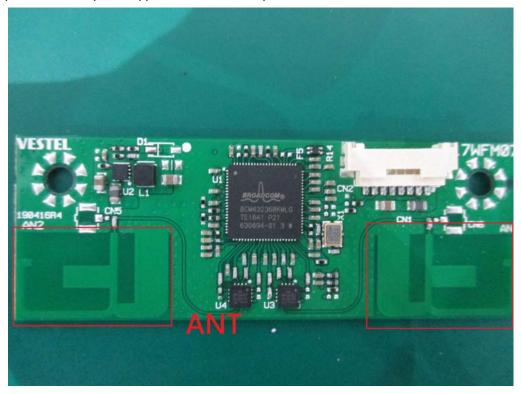


(7) EUT Photo





(8) EUT Photo (WLAN)(Antenna Location)



(9) EUT Photo (BT)(Antenna Location)

