FCC Test Report

Product Name	：	UHD861-P
Trade Name	：	Vestel
Model No.	：	UHD861-P
FCC ID.	：	XU6-UHD861-P

Applicant	：	VESTEL TRADE CO.
Address	：	Organize Sanayi Bölgesi (45030) Manisa/Türkiye

Date of Receipt	：	Mar. 21, 2017
Issued Date	：	Aug. 11, 2017
Report No.	：	1770393R-RFUSP01V01-A
Report Version	：	V2.0

Test Report Certification

Issued Date : Aug. 11, 2017
Report No. : 1770393R-RFUSP01V01-A

Product Name	:	UHD861-P
Applicant	:	VESTEL TRADE CO.
Address	:	Organize Sanayi Bölgesi (45030) Manisa/Türkiye
Manufacturer	:	VESTEL TRADE CO.
Model No.	:	UHD861-P
FCC ID.	:	XU6-UHD861-P
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 KDB 558074 D01 V04
Laboratory Name	:	Hsin Chu Laboratory
Address	:	No.372-2, Sec. 4, Zhongxing Rd., Zhudong Township, Hsinchu County 310, Taiwan, R.O.C. TEL: +886-3-582-8001 / FAX: +886-3-582-8958
Test Result	:	Complied

Documented By : Lyla Yang

(Lyla Yang / Engineering Adm. Specialist)

Tested By : Carter Hsu

(Carter Hsu / Senior Engineer)

Approved By : Roy Wang

(Roy Wang / Director)

Revision History

Report No.	Version	Description	Issued Date
1770393R-RFUSP01V01-A	V2.0	Initial issue of report	Aug. 11, 2017

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1. General Information

1.1. EUT Description

Product Name	UHD861-P
Trade Name	Vestel
Model No.	UHD861-P
Frequency Range/ Channel Number	2402~2480MHz / 40 Channels
Type of Modulation	Bluetooth 4.0 (GFSK)
HW version	MB120DS

Antenna Information	
Antenna Type	PIFA Antenna
Antenna Gain	2 dBi

Accessories Information	
Power Plugs	1 Set
IR Extender	1 Set
Tripod	1 Set
Remote Control	1 Set
Battery	1 Set

Working Frequency of Each Channel							
Channel	Frequency	Channel	Frequency	Channel	Frequency	Channel	Frequency
Channel 00	2402 MHz	Channel 10	2422 MHz	Channel 20	2442 MHz	Channel 30	2462 MHz
Channel 01	2404 MHz	Channel 11	2424 MHz	Channel 21	2444 MHz	Channel 31	2464 MHz
Channel 02	2406 MHz	Channel 12	2426 MHz	Channel 22	2446 MHz	Channel 32	2466 MHz
Channel 03	2408 MHz	Channel 13	2428 MHz	Channel 23	2448 MHz	Channel 33	2468 MHz
Channel 04	2410 MHz	Channel 14	2430 MHz	Channel 24	2450 MHz	Channel 34	2470 MHz
Channel 05	2412 MHz	Channel 15	2432 MHz	Channel 25	2452 MHz	Channel 35	2472 MHz
Channel 06	2414 MHz	Channel 16	2434 MHz	Channel 26	2454 MHz	Channel 36	2474 MHz
Channel 07	2416MHz	Channel 17	2436 MHz	Channel 27	2456 MHz	Channel 37	2476 MHz
Channel 08	2418 MHz	Channel 18	2438 MHz	Channel 28	2458 MHz	Channel 38	2478 MHz
Channel 09	2420 MHz	Channel 19	2440 MHz	Channel 29	2460 MHz	Channel 39	2480 MHz

Note:

1. This device is a UHD861-P including BT2.0 and BT4.0 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.

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

Test Items	Modulation	Channel	Result
Conducted Emission	GFSK	19	Complies
Peak Power Output	GFSK	00/19/39	Complies
Radiated Emission	GFSK	00/19/39	Complies
RF antenna conducted test	GFSK	00/19/39	Complies
Radiated Emission Band Edge	GFSK	00/19/39	Complies
Occupied Bandwidth	GFSK	00/19/39	Complies
Power Density	GFSK	00/19/39	Complies

1.3. Tested System Details

The types for all equipment, 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 4197	DoC	Non-Shielded, 1.8m, one ferrite core bonded

1.4. Configuration of tested System

Connection Diagram

Signal Cable Type		Signal cable Description
A	USB Cable	Non-Shielded, 3m

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.

1.6. Test Facility

Ambient conditions in the laboratory:

Items	Test Item	Required (IEC 68-1)	Actual	Test Site
Temperature (°C)	FCC PART 15 C 15.207 Conducted Emission	15 - 35	20	3
Humidity (%RH)		25 - 75	50	
Barometric pressure (mbar)		860 - 1060	950-1000	
Temperature (°C)	FCC PART 15 C 15.247 Peak Power Output	15 - 35	24	3
Humidity (%RH)		25 - 75	45	
Barometric pressure (mbar)		860 - 1060	950-1000	
Temperature (°C)	FCC PART 15 C 15.247 Radiated Emission	15 - 35	25	2
Humidity (%RH)		25 - 75	54	
Barometric pressure (mbar)		860 - 1060	950-1000	
Temperature (°C)	FCC PART 15 C 15.247 Band Edge	15 - 35	25	2
Humidity (%RH)		25 - 75	50	
Barometric pressure (mbar)		860 - 1060	950-1000	
Temperature (°C)	FCC PART 15 C 15.247 Occupied Bandwidth	15 - 35	24	3
Humidity (%RH)		25 - 75	45	
Barometric pressure (mbar)		860 - 1060	950-1000	
Temperature (°C)	FCC PART 15 C 15.247 RF antenna conducted test	15 - 35	24	3
Humidity (%RH)		25 - 75	45	
Barometric pressure (mbar)		860 - 1060	950-1000	
Temperature (°C)	FCC PART 15 C 15.247 Power Density	15 - 35	24	3
Humidity (%RH)		25 - 75	45	
Barometric pressure (mbar)		860 - 1060	950-1000	

Note: Test Site information refers to Laboratory Information.

Laboratory Information

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

If you have any comments, Please don't hesitate to contact us. Our test sites as below:

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2. Conducted Emission

2.1. Test Equipment

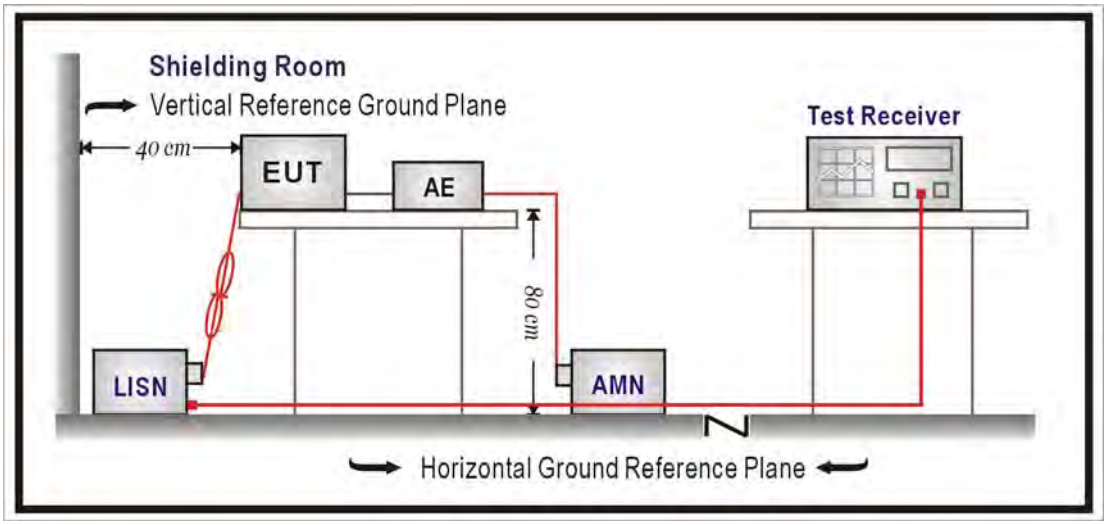
The following test equipment are used during the test:

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 equipment 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 was setup according to ANSI C63.10: 2013 and tested according to DTS test procedure of KDB558074 for compliance to FCC 47CFR 15.247 requirements.
The EUT was placed on a platform of nominal size, 1 m by 1.5 m, raised 80 cm above the conducting ground plane. The vertical conducting plane was located 40 cm to the rear of the EUT. All other surfaces of EUT were at least 80 cm from any other grounded conducting surface. The EUT and simulators are connected to the main power through a line impedance stabilization network (LISN). The LISN provides a 50 ohm /50uH coupling impedance for the measuring equipment. The peripheral devices are also connected to the main power through a LISN. (Please refer to the block diagram of the test setup and photographs.)
Each current-carrying conductor of the EUT power cord, except the ground (safety) conductor, was individually connected through a LISN to the input power source.
The excess length of the power cord between the EUT and the LISN receptacle were folded back and forth at the center of the lead to form a bundle not exceeding 40 cm in length.
Conducted emissions were investigated over the frequency range from 0.15MHz to 30MHz using a receiver bandwidth of 9 kHz.

2.5. Test Specification

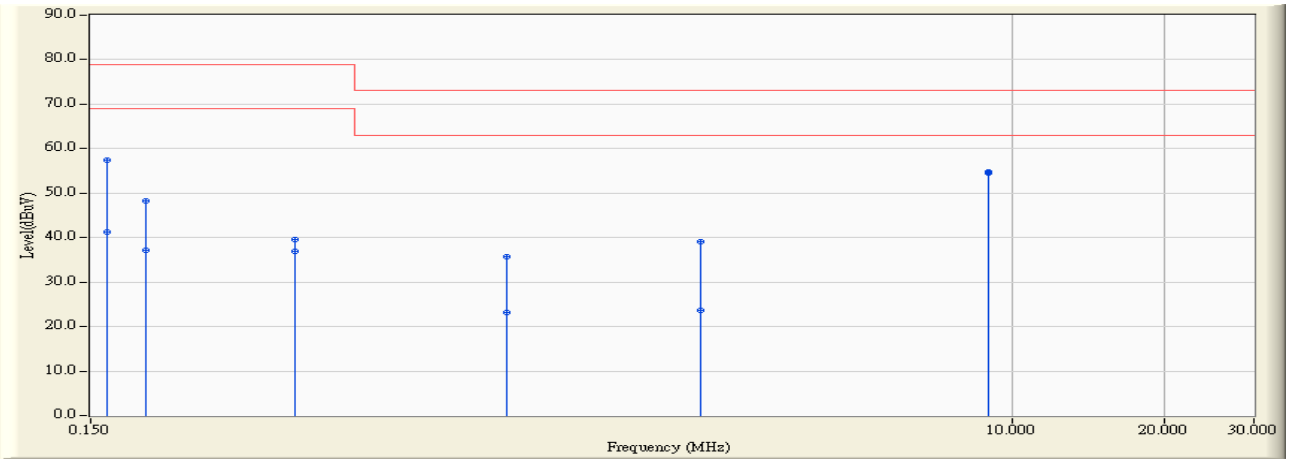
According to FCC Part 15 Subpart C Paragraph 15.207: 2015

2.6. Uncertainty

The measurement uncertainty is defined as ± 2.26 dB.

2.7. Test Result

Site : SR2-H	**Time : 2017/08/09**
Limit : CISPR_A_00M_QP	**Margin : 10**
Probe : SR2_LISN(16A)-6_0712 - Line1	**Power : AC 120V/60Hz**
EUT : UHD861-P	**Note : Mode 1: Tx_802.15.1_BLE_2440MHz**

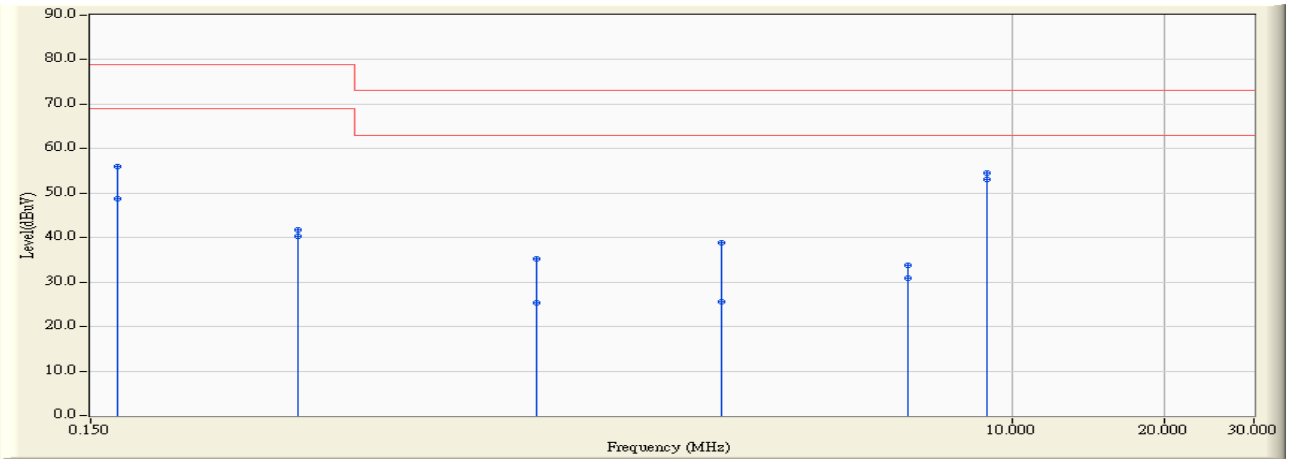


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV)	Margin (dB)	Limit (dBuV)	Detector Type
1		0.162	9.754	47.600	57.354	-21.646	79.000	QUASIPEAK
2		0.162	9.754	31.600	41.354	-24.646	66.000	AVERAGE
3		0.193	9.751	38.580	48.331	-30.669	79.000	QUASIPEAK
4		0.193	9.751	27.360	37.111	-28.889	66.000	AVERAGE
5		0.380	9.732	29.800	39.532	-39.468	79.000	QUASIPEAK
6		0.380	9.732	27.080	36.812	-29.188	66.000	AVERAGE
7		0.998	9.819	25.930	35.749	-37.251	73.000	QUASIPEAK
8		0.998	9.819	13.440	23.259	-36.741	60.000	AVERAGE
9		2.408	9.872	29.290	39.162	-33.838	73.000	QUASIPEAK
10		2.408	9.872	13.730	23.602	-36.398	60.000	AVERAGE
11		8.931	10.085	44.800	54.885	-18.115	73.000	QUASIPEAK
12	*	8.931	10.085	44.350	54.435	-5.565	60.000	AVERAGE

Note:

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 : 2017/08/09**
Limit : CISPR_A_00M_QP	**Margin : 10**
Probe : SR2_LISN(16A)-6_0712 - Line2	**Power : AC 120V/60Hz**
EUT : UHD861-P	**Note : Mode 1: Tx_802.15.1_BLE_2440MHz_TX**



		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV)	Margin (dB)	Limit (dBuV)	Detector Type
1		0.170	9.753	46.340	56.093	-22.907	79.000	QUASIPEAK
2		0.170	9.753	38.970	48.723	-17.277	66.000	AVERAGE
3		0.384	9.750	31.890	41.640	-37.360	79.000	QUASIPEAK
4		0.384	9.750	30.590	40.340	-25.660	66.000	AVERAGE
5		1.142	9.824	25.500	35.324	-37.676	73.000	QUASIPEAK
6		1.142	9.824	15.400	25.224	-34.776	60.000	AVERAGE
7		2.662	9.847	29.000	38.847	-34.153	73.000	QUASIPEAK
8		2.662	9.847	15.710	25.557	-34.443	60.000	AVERAGE
9		6.213	9.929	23.840	33.769	-39.231	73.000	QUASIPEAK
10		6.213	9.929	21.010	30.939	-29.061	60.000	AVERAGE
11		8.888	10.086	44.430	54.515	-18.485	73.000	QUASIPEAK
12	*	8.888	10.086	43.070	53.155	-6.845	60.000	AVERAGE

Note:

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.

3. Peak Power Output

3.1. Test Equipment

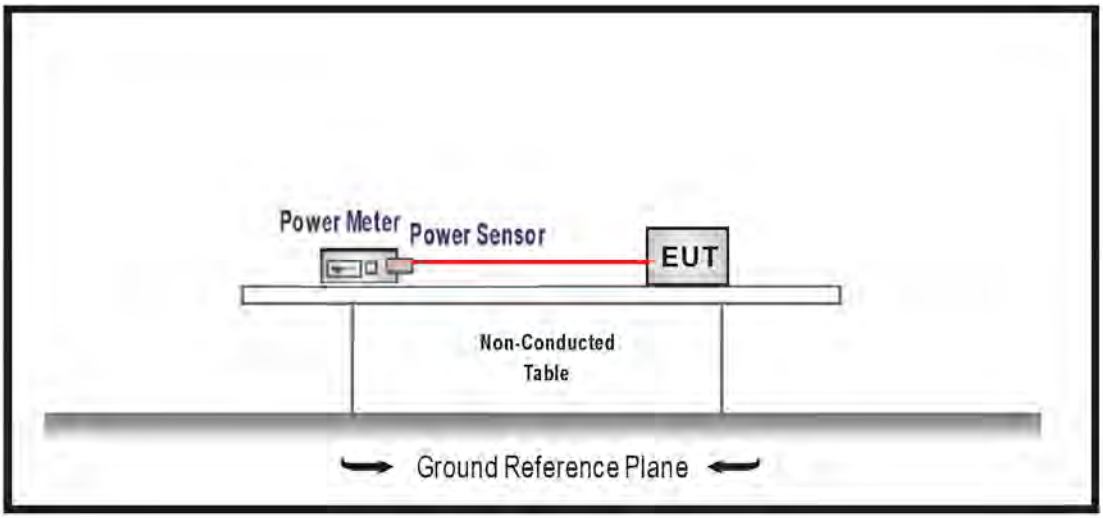
The following test equipment is used during the test:

Peak Power Output / SR10-H

Instrument	Manufacturer	Model No.	Serial No	Next Cal. Date
High Speed Peak Power Meter Dual Input	Anritsu	ML2496A	1602004	2018/01/19
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; tested according to DTS test procedure of KDB558074 D01 V04 for compliance to FCC 47CFR 15.247 requirements.

3.4. Limits

The maximum peak power shall be less 1 Watt.

3.5. Test Specification

According to FCC Part 15 Subpart C Paragraph 15.247

3.6. Test Result

Product	UHD861-P		
Test Item	Peak Power Output		
Test Mode	Mode 1: Tx		
Date of Test	2017/03/21	Test Site	SR10-H

GFSK

Channel No.	Frequency (MHz)	Measure Level (dBm)	Limit (dBm)	Result
00	2402	2.890	30	Pass
19	2440	3.090	30	Pass
39	2480	3.090	30	Pass

4. Radiated Emission

4.1. Test Equipment

The following test equipment are used during the test:

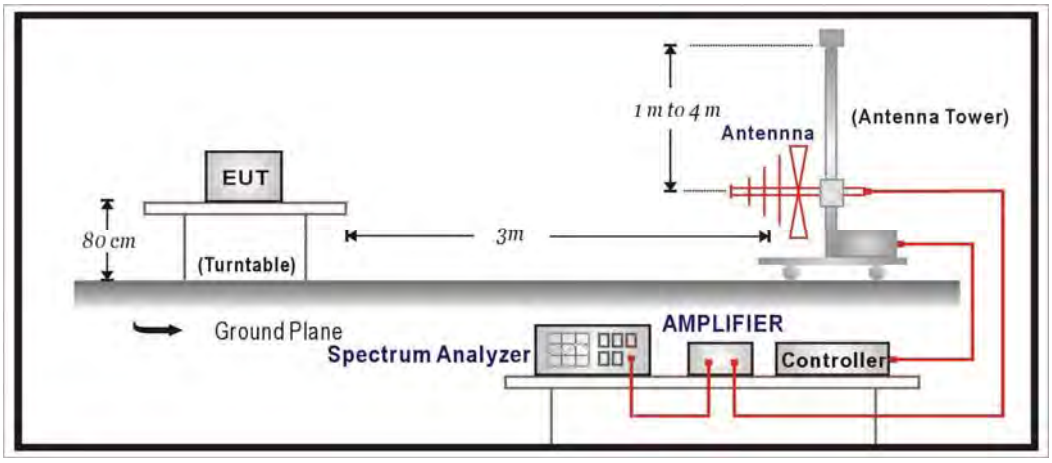
Radiated Emission / CB4-H

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	JS41-00104000-58-5P	1573954	2017/10/04
Horn Antenna	Schwarzbeck	BBHA 9170	203	2017/08/28
Signal & Spectrum Analyzer	R&S	FSV40	101049	2018/01/22

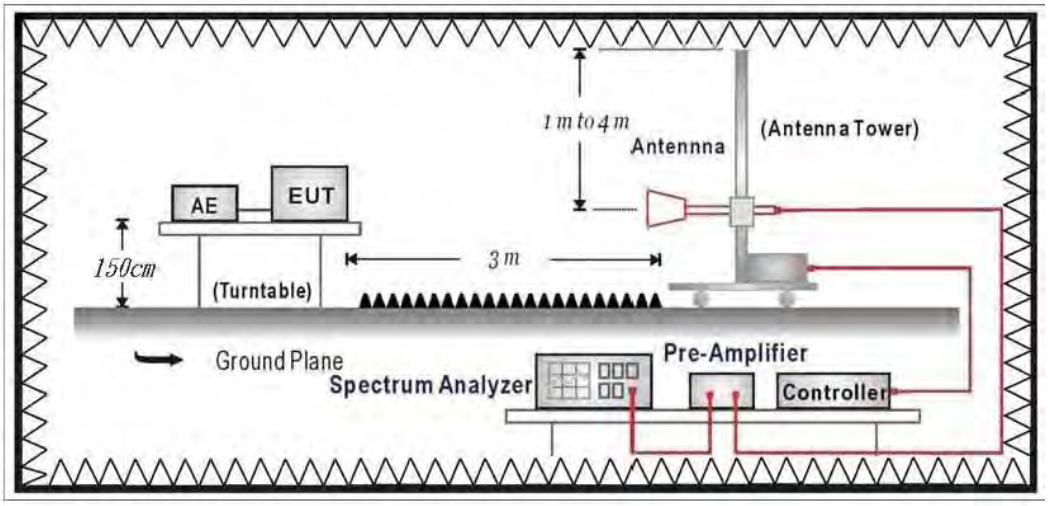
Note: All equipment that need to calibrate are with calibration period of 1 year.

4.2. Test Setup

Under 1GHz Test Setup:



Above 1GHz Test Setup:



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 DTS test procedure of KDB558074 D01 V04 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.

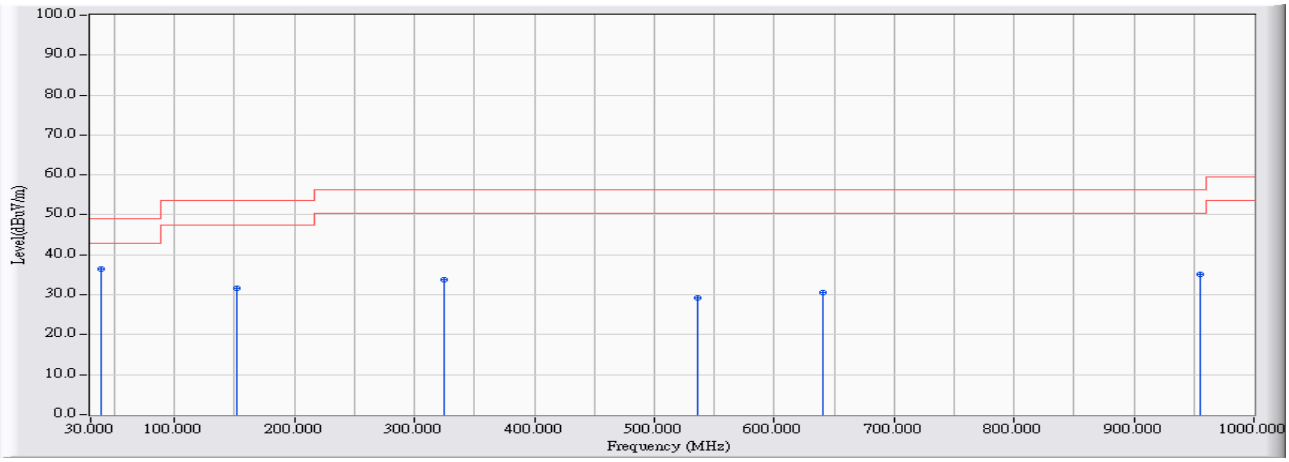
4.5. Test Specification

According to FCC Part 15 Subpart C Paragraph 15.247

4.6. Test Result

30MHz-1GHz Spurious

Site : CB4-H	**Time : 2017/08/07**
Limit : FCC_CLASS_A_03M_QP	**Margin : 6**
Probe : CB4_FCC_EFS_S2_30M-1GHz_1116 - HORIZONTAL	**Power : AC 120V/60Hz**
EUT : UHD861-P	**Note : Mode 1: Tx_802.15.1_BLE_2440MHz**

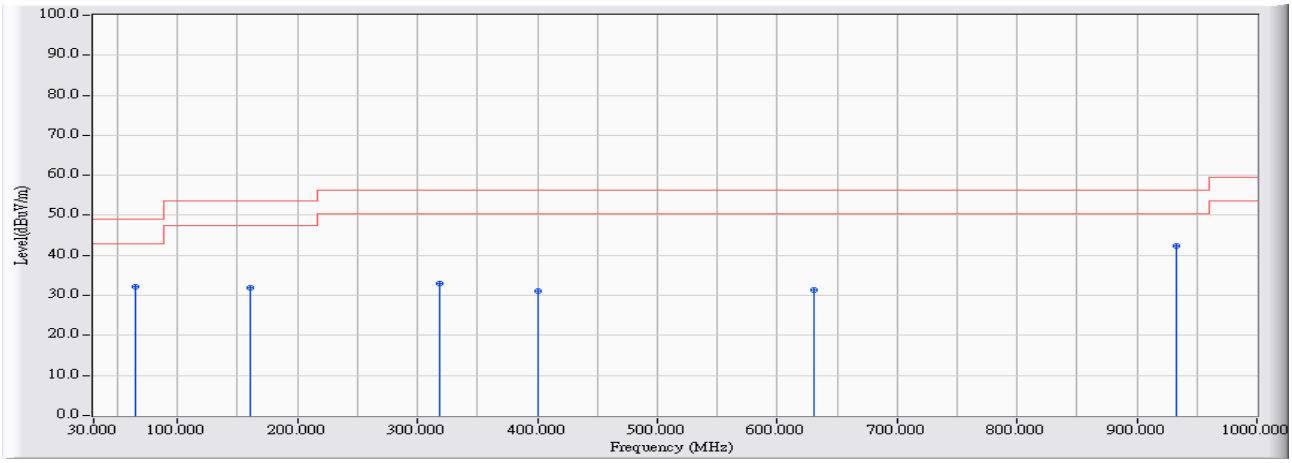


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1	*	38.341	-16.269	52.757	36.488	-12.512	49.000	QUASIPEAK
2		151.917	-22.379	53.935	31.557	-21.943	53.500	QUASIPEAK
3		324.851	-18.838	52.639	33.800	-22.600	56.400	QUASIPEAK
4		536.192	-14.013	43.336	29.323	-27.077	56.400	QUASIPEAK
5		640.748	-13.176	43.693	30.517	-25.883	56.400	QUASIPEAK
6		954.706	-8.009	43.235	35.226	-21.174	56.400	QUASIPEAK

Note:

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 : 2017/08/07**
Limit : FCC_CLASS_A_03M_QP	**Margin : 6**
Probe : CB4_FCC_EFS_S2_30M-1GHz_1116 - VERTICAL	**Power : AC 120V/60Hz**
EUT : UHD861-P	**Note : Mode 1: Tx_802.15.1_BLE_2440MHz**



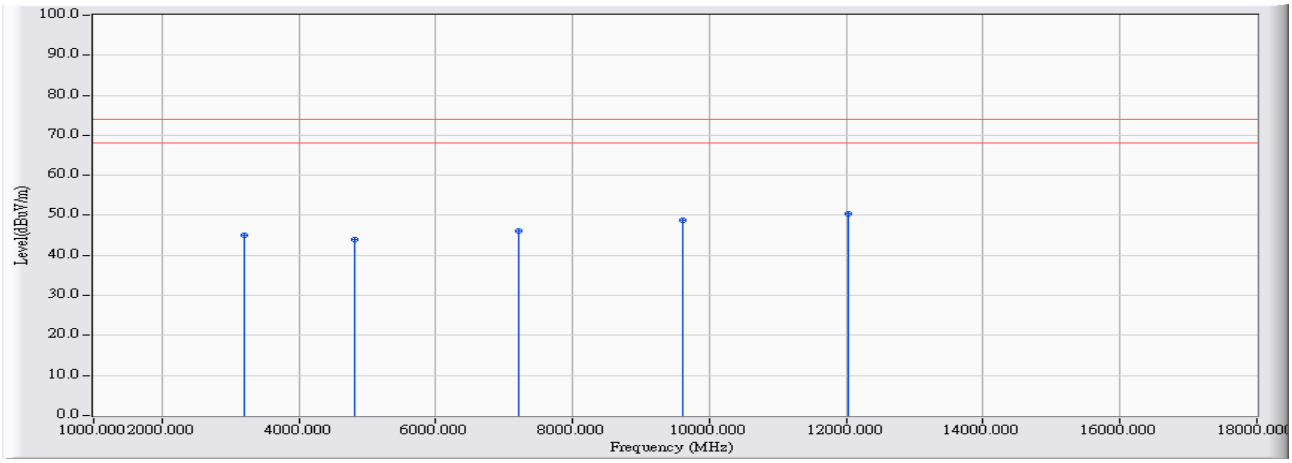
		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1		65.304	-28.018	60.136	32.118	-16.882	49.000	QUASIPEAK
2		159.967	-22.945	54.846	31.901	-21.599	53.500	QUASIPEAK
3		317.964	-19.191	52.224	33.032	-23.368	56.400	QUASIPEAK
4		400.891	-15.989	47.152	31.163	-25.237	56.400	QUASIPEAK
5		630.661	-12.621	44.087	31.466	-24.934	56.400	QUASIPEAK
6	*	932.301	-8.400	50.833	42.433	-13.967	56.400	QUASIPEAK

Note:

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 : 2017/08/03**
Limit : FCC_SpartC_15.209_03M_PK	**Margin : 6**
Probe : CB4_FCC_EFS_B091_1-18GHz_3M_0117 - HORIZONTAL	**Power : AC 120V/60Hz**
EUT : UHD861-P	**Note : Mode 1: Tx_802.15.1_BLE_2402MHz**

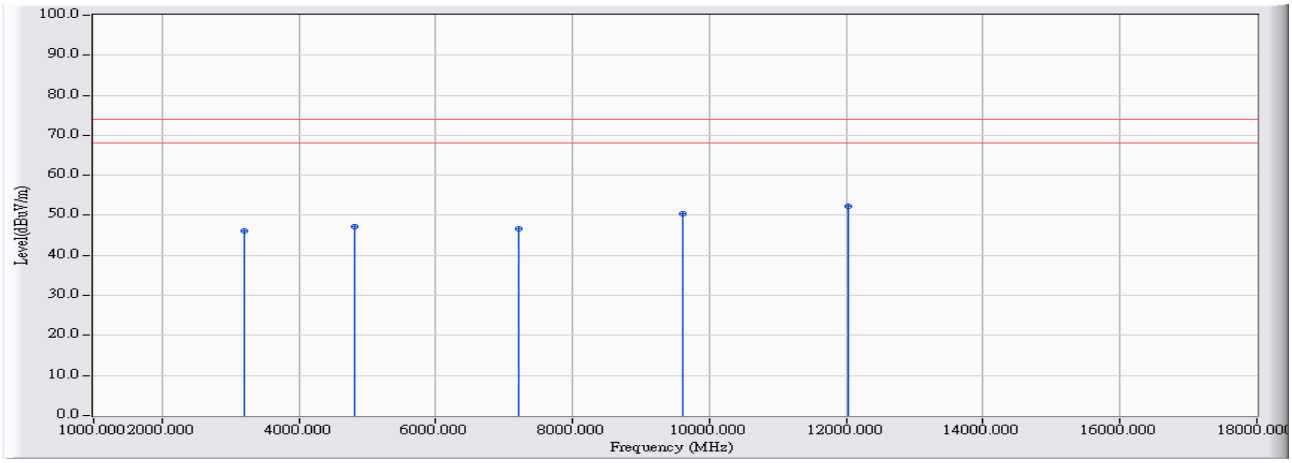


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1		3202.140	-6.795	51.890	45.095	-28.905	74.000	PEAK
2		4803.482	-0.209	44.120	43.911	-30.089	74.000	PEAK
3		7205.242	6.961	39.180	46.141	-27.859	74.000	PEAK
4		9611.719	12.551	36.220	48.771	-25.229	74.000	PEAK
5	*	12023.790	15.464	34.980	50.444	-23.556	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 = 3 MHz, 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 : 2017/08/03**
Limit : FCC_SpartC_15.209_03M_PK	**Margin : 6**
Probe : CB4_FCC_EFS_B091_1-18GHz_3M_0117 - VERTICAL	**Power : AC 120V/60Hz**
EUT : UHD861-P	**Note : Mode 1: Tx_802.15.1_BLE_2402MHz**

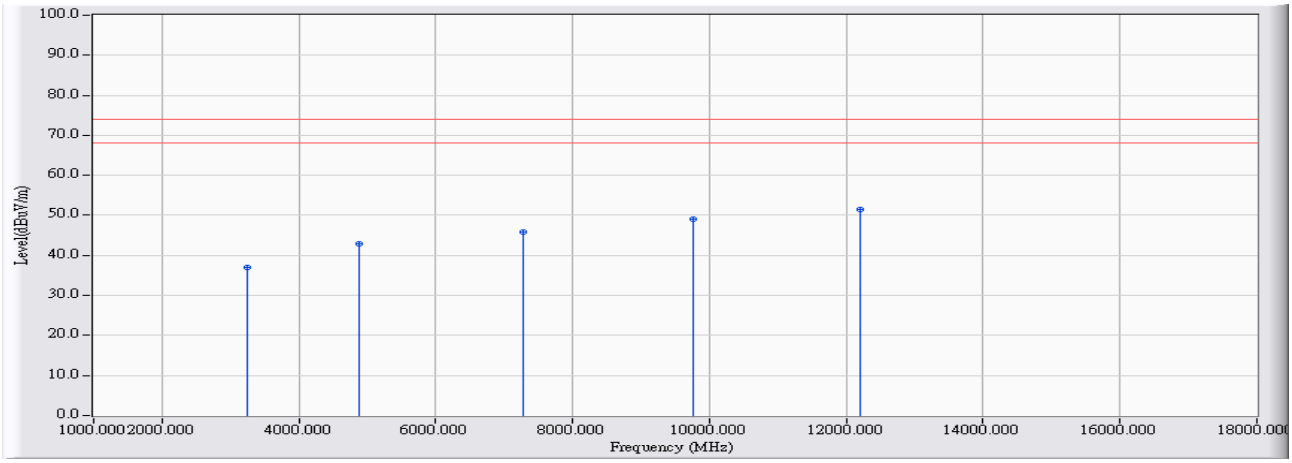


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1		3202.525	-6.794	52.860	46.066	-27.934	74.000	PEAK
2		4804.280	-0.207	47.420	47.212	-26.788	74.000	PEAK
3		7204.895	6.959	39.640	46.598	-27.402	74.000	PEAK
4		9608.291	12.542	37.850	50.392	-23.608	74.000	PEAK
5	*	12026.321	15.455	36.750	52.205	-21.795	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 = 3 MHz, 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 : 2017/08/03**
Limit : FCC_SpartC_15.209_03M_PK	**Margin : 6**
Probe : CB4_FCC_EFS_B091_1-18GHz_3M_0117 - HORIZONTAL	**Power : AC 120V/60Hz**
EUT : UHD861-P	**Note : Mode 1: Tx_802.15.1_BLE_2440MHz**

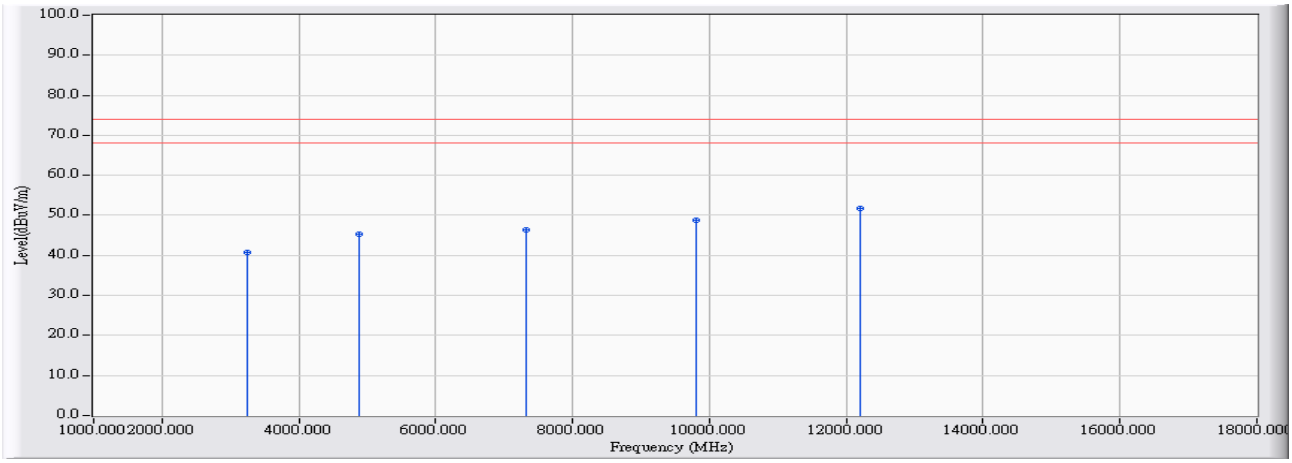


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1		3253.280	-6.709	43.710	37.002	-36.998	74.000	PEAK
2		4879.496	-0.126	43.120	42.994	-31.006	74.000	PEAK
3		7281.051	7.350	38.540	45.890	-28.110	74.000	PEAK
4		9766.285	12.874	36.120	48.994	-25.006	74.000	PEAK
5	*	12201.203	14.847	36.580	51.427	-22.573	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 = 3 MHz, 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 : 2017/08/03**
Limit : FCC_SpartC_15.209_03M_PK	**Margin : 6**
Probe : CB4_FCC_EFS_B091_1-18GHz_3M_0117 - VERTICAL	**Power : AC 120V/60Hz**
EUT : UHD861-P	**Note : Mode 1: Tx_802.15.1_BLE_2440MHz**

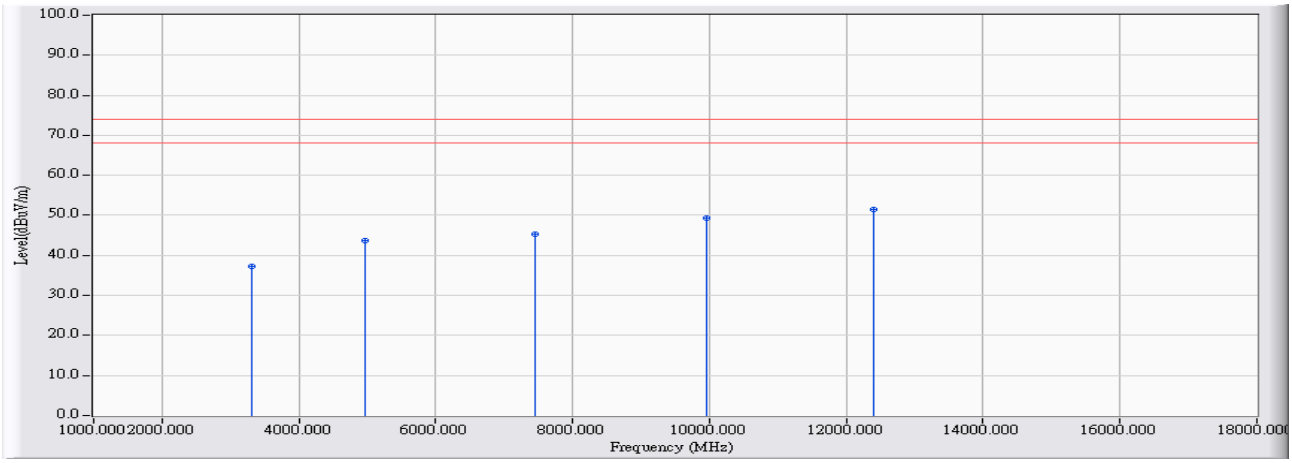


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1		3253.634	-6.708	47.550	40.843	-33.157	74.000	PEAK
2		4879.729	-0.126	45.370	45.244	-28.756	74.000	PEAK
3		7321.304	7.441	38.840	46.281	-27.719	74.000	PEAK
4		9795.796	12.916	35.960	48.876	-25.124	74.000	PEAK
5	*	12191.783	14.881	36.930	51.810	-22.190	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 = 3 MHz, 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 : 2017/08/03**
Limit : FCC_SpartC_15.209_03M_PK	**Margin : 6**
Probe : CB4_FCC_EFS_B091_1-18GHz_3M_0117 - HORIZONTAL	**Power : AC 120V/60Hz**
EUT : UHD861-P	**Note : Mode 1: Tx_802.15.1_BLE_2480MHz**

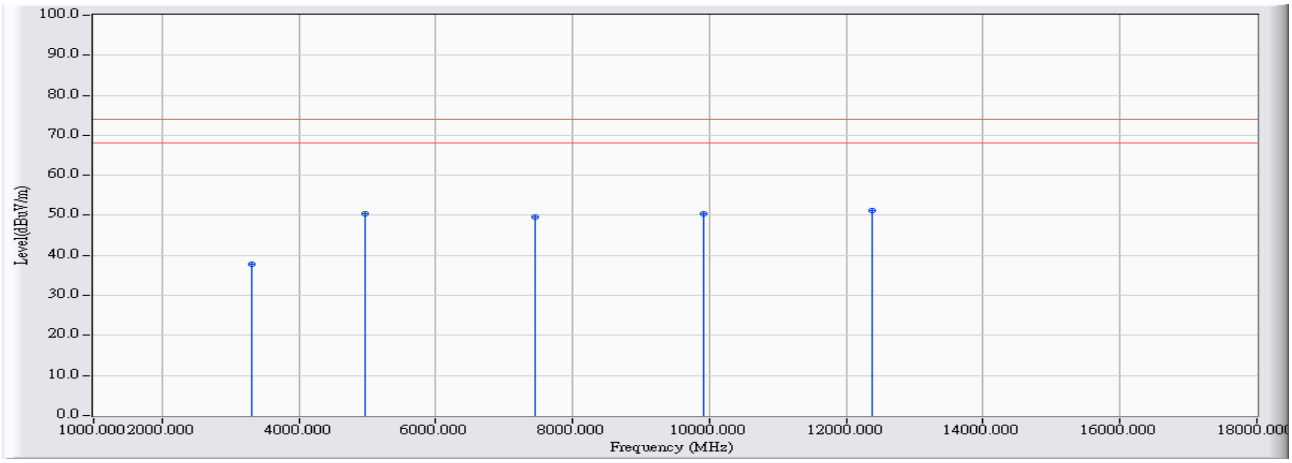


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1		3306.519	-6.602	43.860	37.257	-36.743	74.000	PEAK
2		4960.647	-0.033	43.780	43.746	-30.254	74.000	PEAK
3		7441.342	7.873	37.470	45.343	-28.657	74.000	PEAK
4		9957.052	13.144	36.150	49.293	-24.707	74.000	PEAK
5	*	12403.215	15.756	35.760	51.516	-22.484	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 = 3 MHz, 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 : 2017/08/03**
Limit : FCC_SpartC_15.209_03M_PK	**Margin : 6**
Probe : CB4_FCC_EFS_B091_1-18GHz_3M_0117 - VERTICAL	**Power : AC 120V/60Hz**
EUT : UHD861-P	**Note : Mode 1: Tx_802.15.1_BLE_2480MHz**



		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1		3307.585	-6.600	44.470	37.869	-36.131	74.000	PEAK
2		4959.784	-0.034	50.370	50.335	-23.665	74.000	PEAK
3		7443.529	7.881	41.840	49.721	-24.279	74.000	PEAK
4		9920.254	13.092	37.220	50.311	-23.689	74.000	PEAK
5	*	12381.033	15.599	35.510	51.109	-22.891	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 = 3 MHz, 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:

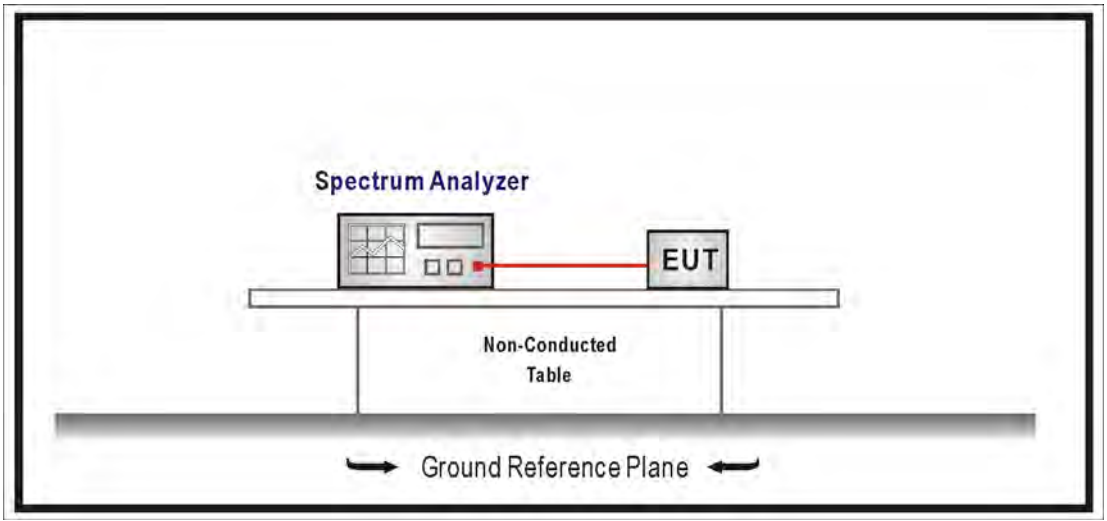
RF antenna conducted test / SR10-H

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

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

5.2. Test Setup

RF Conducted Measurement:



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 DTS test procedure of KDB558074 D01 V04 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

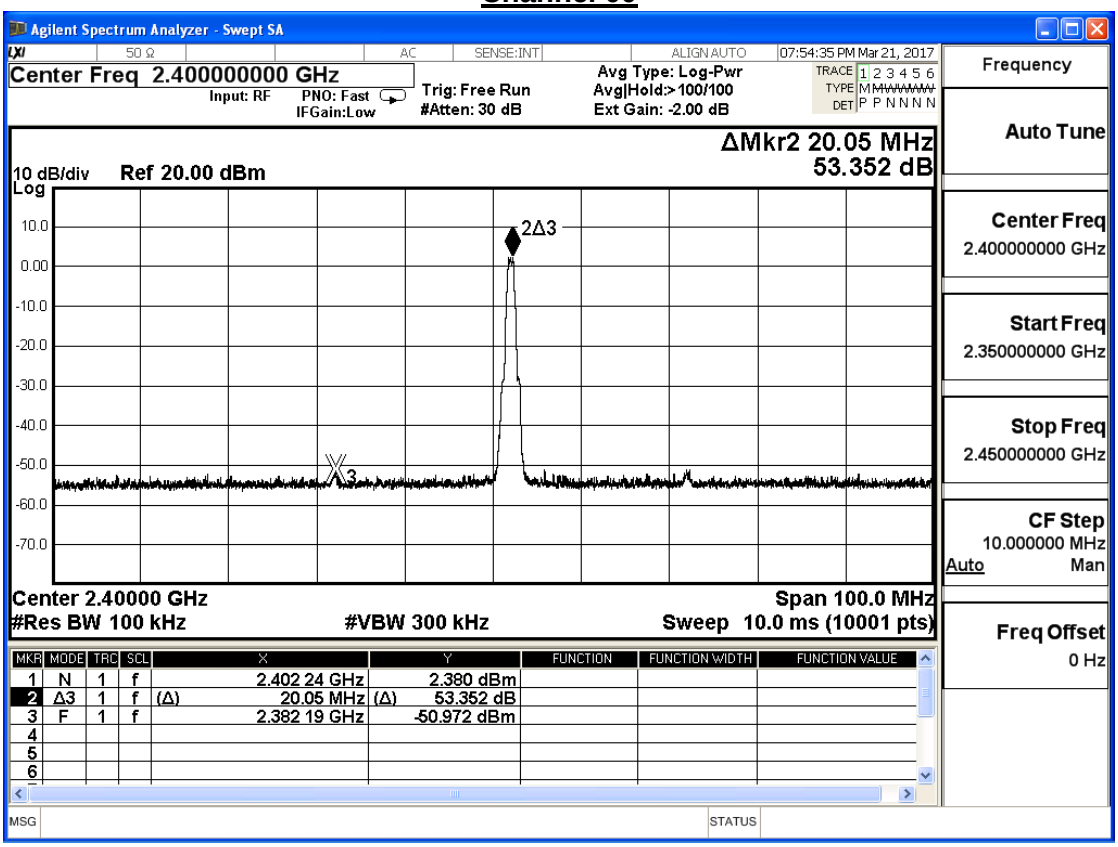
5.6. Test Result

Product	UHD861-P		
Test Item	RF antenna conducted test		
Test Mode	Mode 1: Tx		
Date of Test	2017/03/21	Test Site	SR10-H

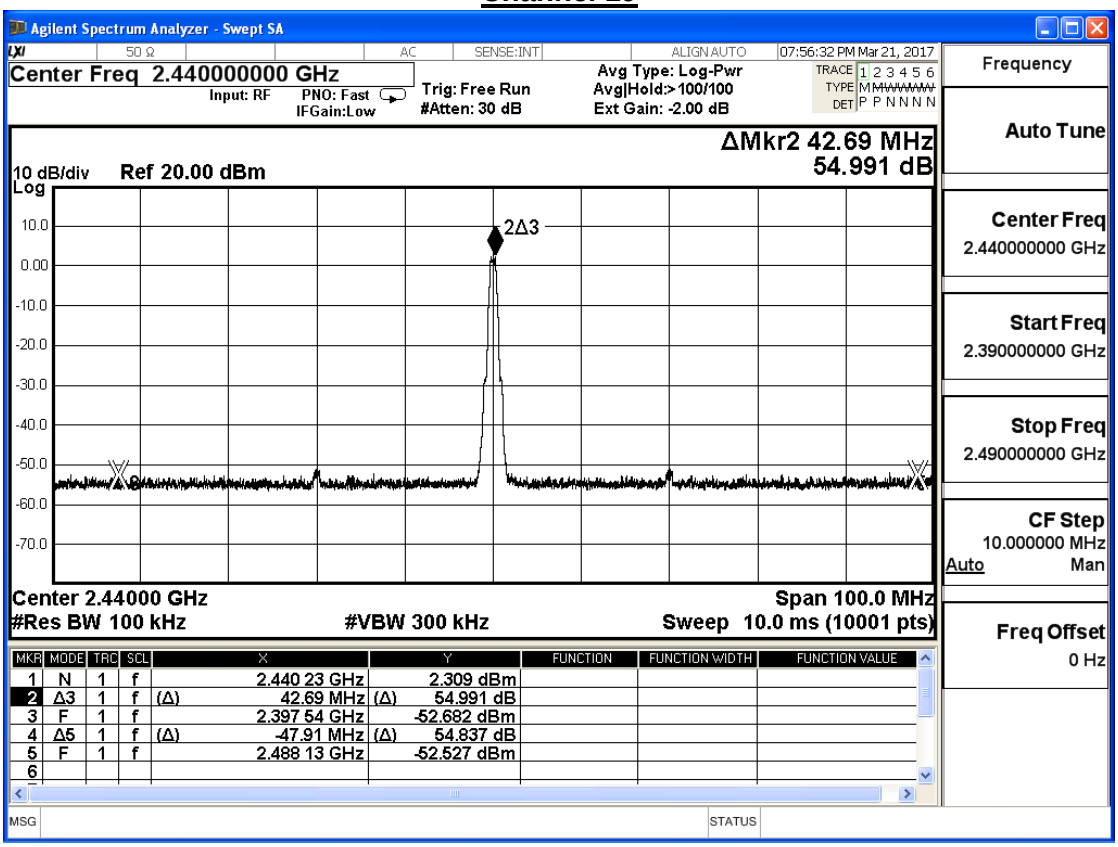
GFSK

Channel	Frequency (MHz)	Measure Level (dBc)	Limit (dBc)	Result
00	2402	53.352	≧20	Pass
19	2440	54.837	≧20	Pass
39	2480	53.165	≧20	Pass

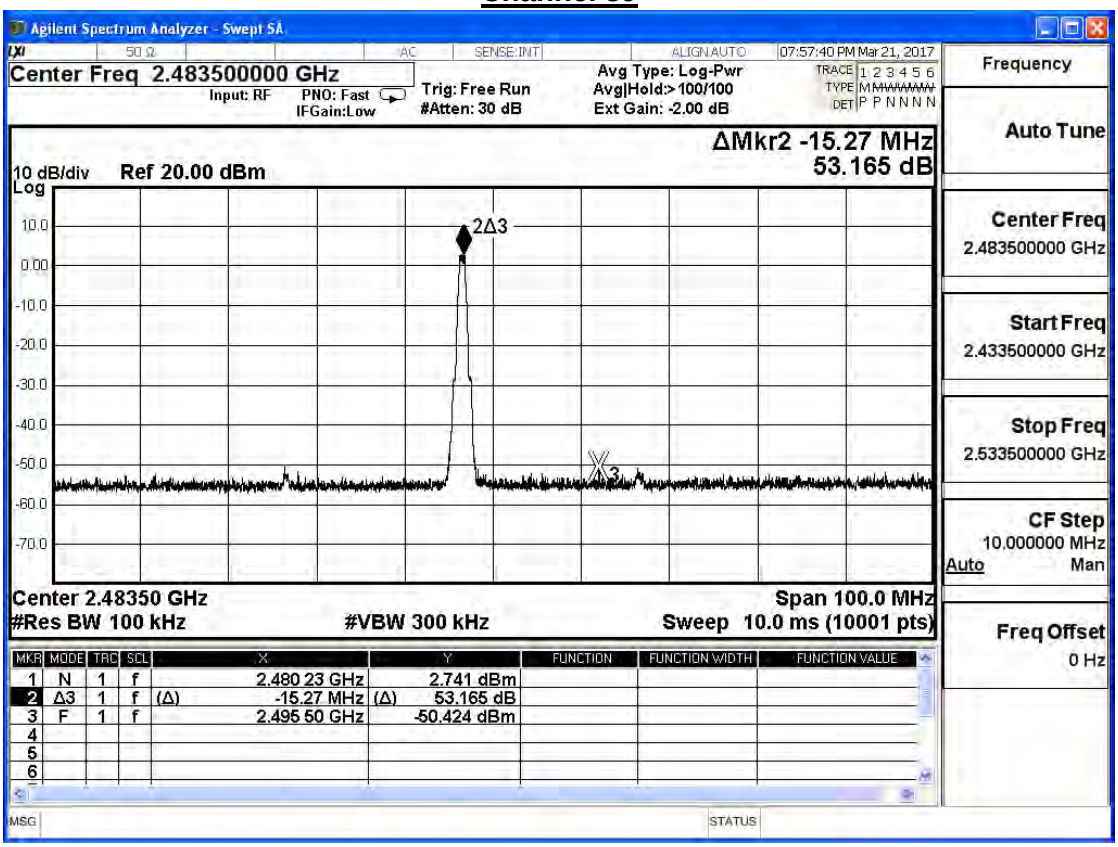
Channel 00



Channel 19

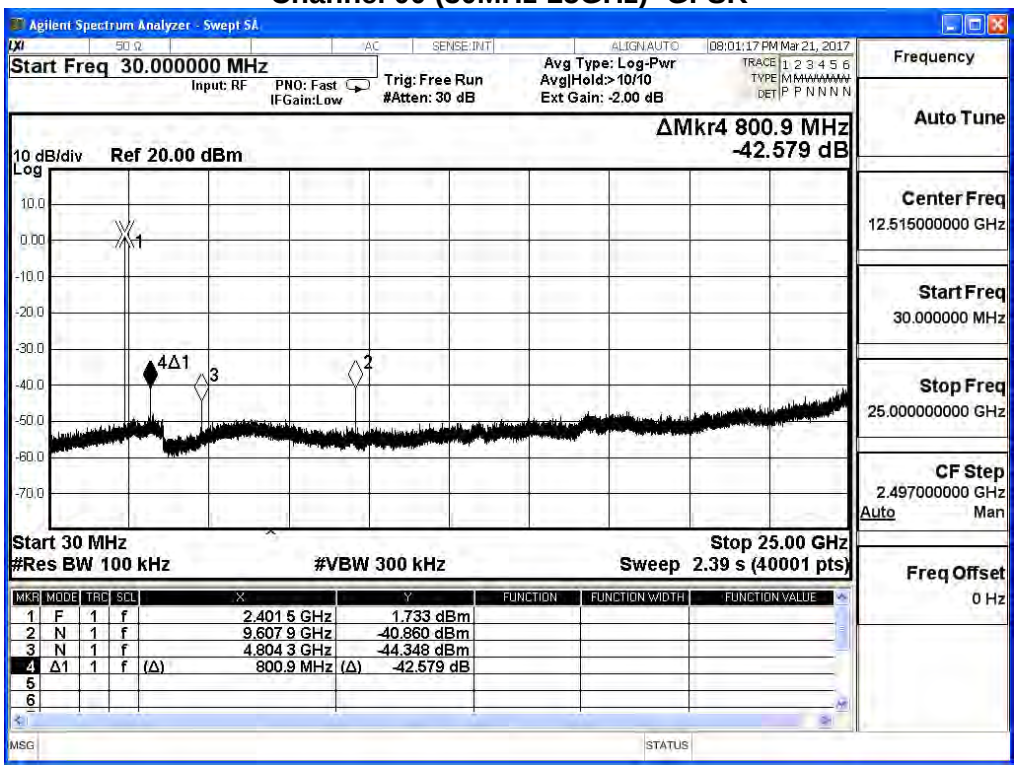


Channel 39

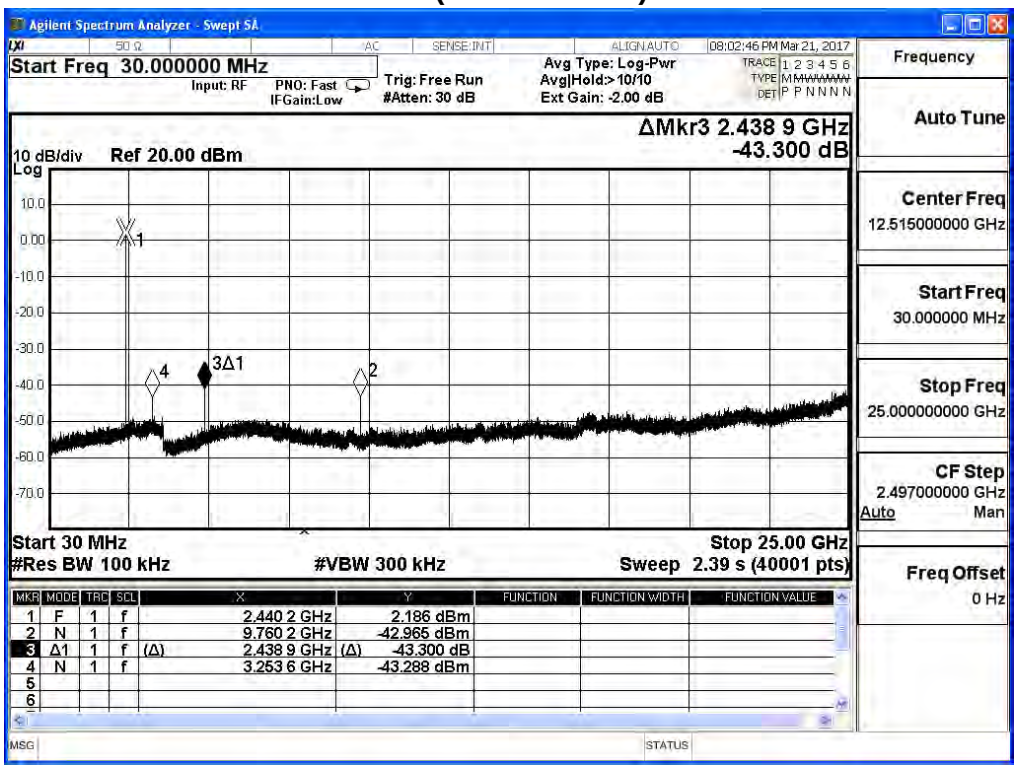


Product	UHD861-P		
Test Item	RF antenna conducted test		
Test Mode	Mode 1: Tx		
Date of Test	2017/03/21	Test Site	SR10-H

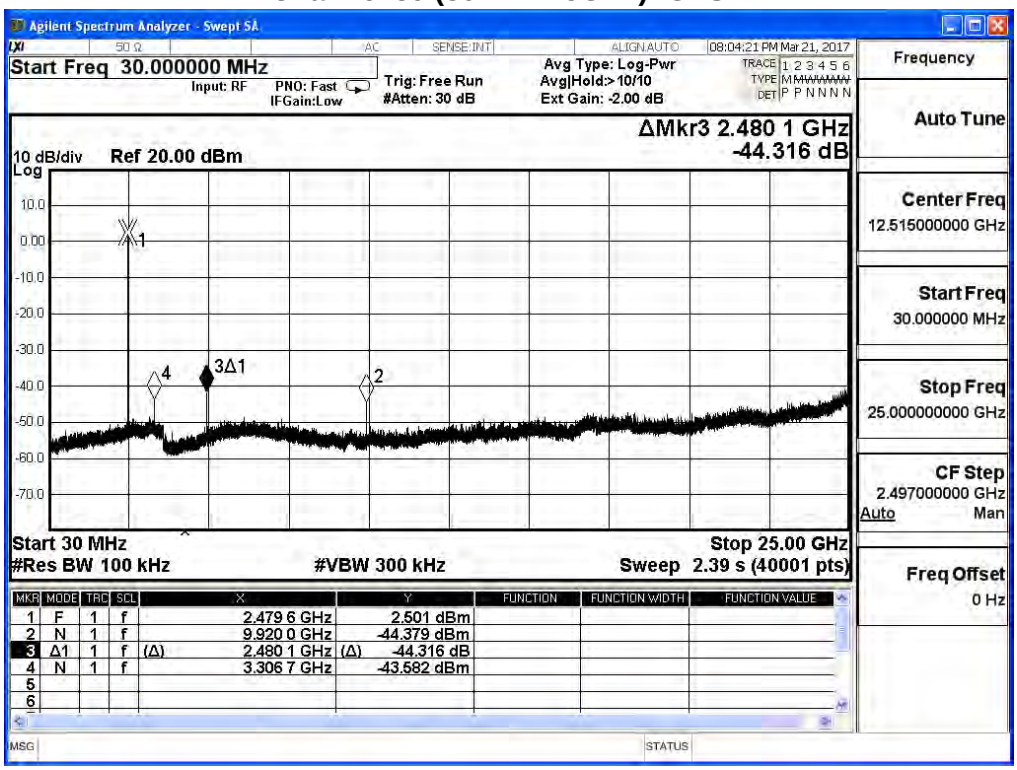
Channel 00 (30MHz-25GHz)- GFSK



Channel 19 (30MHz-25GHz)- GFSK



Channel 39 (30MHz-25GHz)- GFSK



6. Band Edge

6.1. Test Equipment

The following test equipment are used during the test:

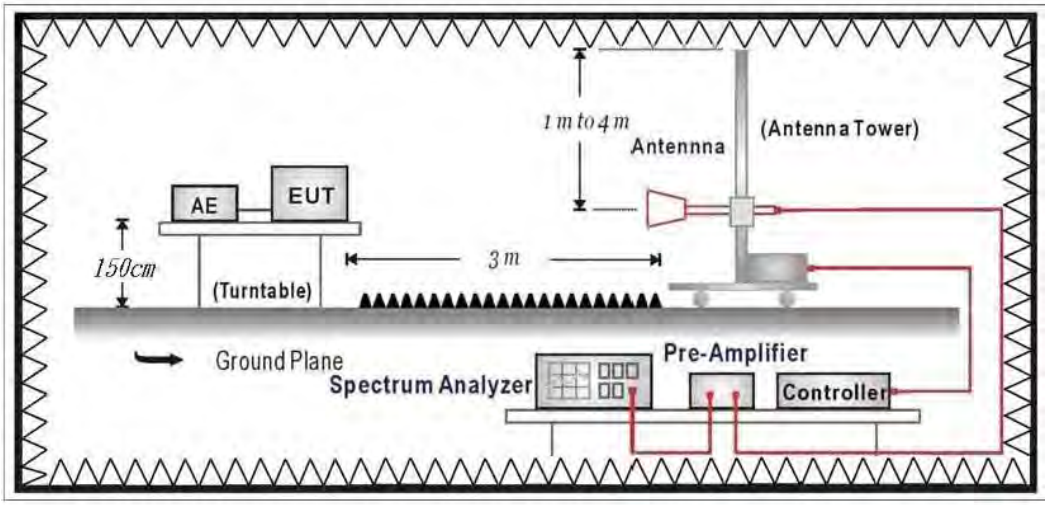
Band Edge / CB4-H

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 equipment that need to calibrate are with calibration period of 1 year.

6.2. Test Setup

RF Radiated Measurement:



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 DTS test procedure of KDB558074 D01 V04 for compliance to FCC 47CFR 15.247 requirements.

The EUT and its simulators are placed on a turn table which is 0.8 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.

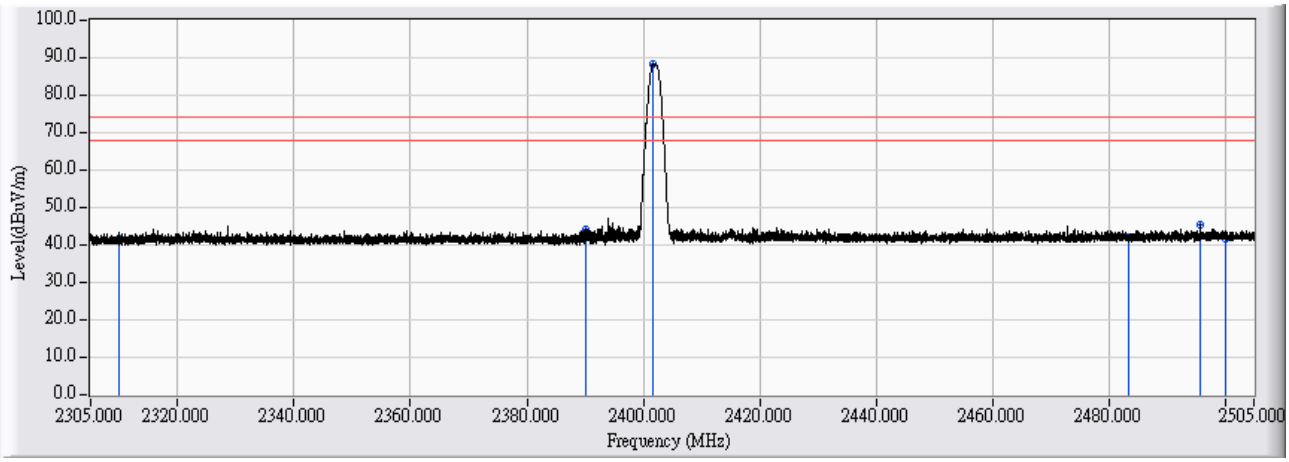
Both horizontal and vertical polarization of the antenna are set on measurement. In order to find the maximum emission, all of the interface cables must be manipulated according to ANSI C63.10:2013 on radiated measurement.

6.5. Test Specification

According to FCC Part 15 Subpart C Paragraph 15.247

6.6. Test Result

Site : CB4-H	**Time : 2017/08/03**
Limit : FCC_SpartC_15.209_03M_PK	**Margin : 6**
Probe : CB4_FCC_EFS_B091_1-18GHz_3M_0117 - HORIZONTAL	**Power : AC 120V/60Hz**
EUT : UHD861-P	**Note : Mode 1: Tx_802.15.1_BLE_2402MHz**

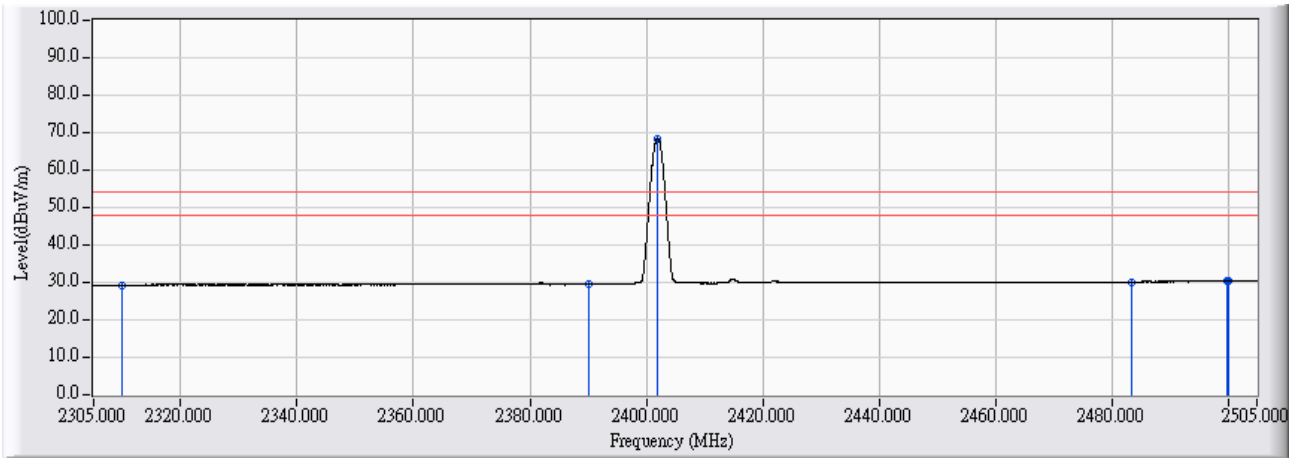


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1		2310.000	11.014	30.817	41.832	-32.168	74.000	PEAK
2		2390.000	11.544	32.497	44.041	-29.959	74.000	PEAK
3	*	2401.770	11.622	76.597	88.220	14.220	74.000	PEAK
4		2483.500	12.172	29.775	41.947	-32.053	74.000	PEAK
5		2495.821	12.254	33.082	45.336	-28.664	74.000	PEAK
6		2500.000	12.274	29.551	41.826	-32.174	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 = 3 MHz, 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 : 2017/08/03**
Limit : FCC_SpartC_15.209_03M_AV	**Margin : 6**
Probe : CB4_FCC_EFS_B091_1-18GHz_3M_0117 - HORIZONTAL	**Power : AC 120V/60Hz**
EUT : UHD861-P	**Note : Mode 1: Tx_802.15.1_BLE_2402MHz**

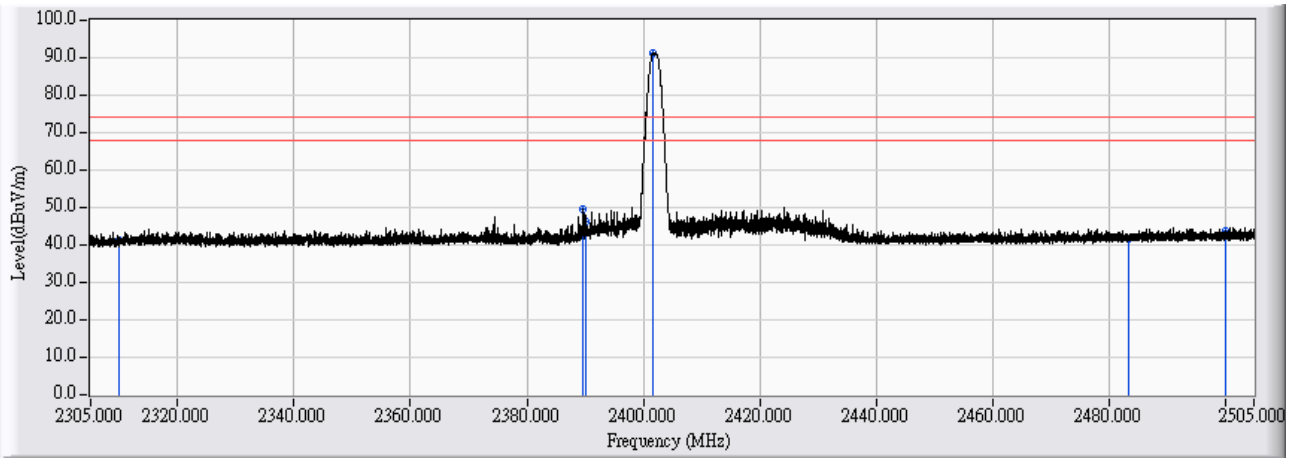


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1		2310.000	11.014	18.199	29.214	-24.786	54.000	AVERAGE
2		2390.000	11.544	17.980	29.524	-24.476	54.000	AVERAGE
3	*	2401.890	11.623	56.905	68.528	14.528	54.000	AVERAGE
4		2483.500	12.172	18.001	30.173	-23.827	54.000	AVERAGE
5		2499.760	12.274	18.142	30.416	-23.584	54.000	AVERAGE
6		2500.000	12.274	18.075	30.350	-23.650	54.000	AVERAGE

Note:

1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, 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 : 2017/08/03**
Limit : FCC_SpartC_15.209_03M_PK	**Margin : 6**
Probe : CB4_FCC_EFS_B091_1-18GHz_3M_0117 - VERTICAL	**Power : AC 120V/60Hz**
EUT : UHD861-P	**Note : Mode 1: Tx_802.15.1_BLE_2402MHz**

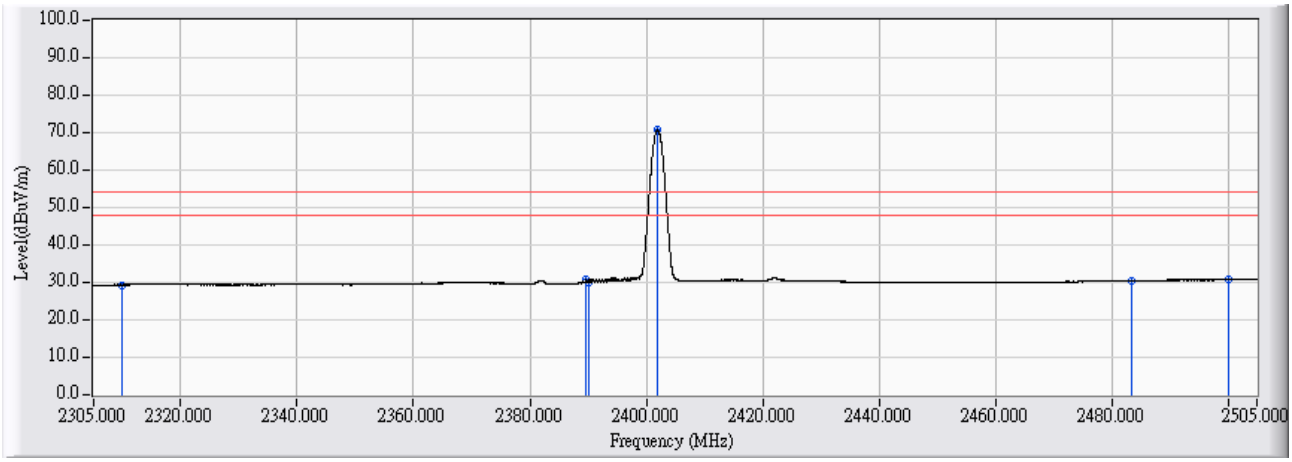


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1		2310.000	11.014	30.268	41.283	-32.717	74.000	PEAK
2		2389.611	11.542	37.924	49.465	-24.535	74.000	PEAK
3		2390.000	11.544	34.900	46.444	-27.556	74.000	PEAK
4	*	2401.750	11.622	79.553	91.176	17.176	74.000	PEAK
5		2483.500	12.172	29.467	41.639	-32.361	74.000	PEAK
6		2500.000	12.274	31.317	43.592	-30.408	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 = 3 MHz, 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 : 2017/08/03**
Limit : FCC_SpartC_15.209_03M_AV	**Margin : 6**
Probe : CB4_FCC_EFS_B091_1-18GHz_3M_0117 - VERTICAL	**Power : AC 120V/60Hz**
EUT : UHD861-P	**Note : Mode 1: Tx_802.15.1_BLE_2402MHz**

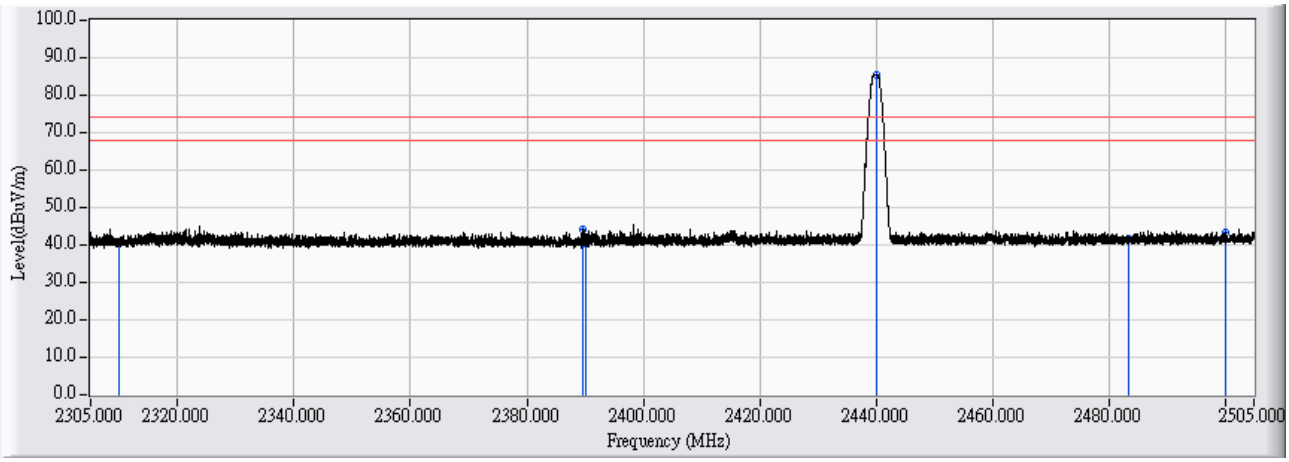


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1		2310.000	11.014	18.351	29.366	-24.634	54.000	AVERAGE
2		2389.611	11.542	19.098	30.639	-23.361	54.000	AVERAGE
3		2390.000	11.544	18.504	30.048	-23.952	54.000	AVERAGE
4	*	2401.930	11.623	59.163	70.787	16.787	54.000	AVERAGE
5		2483.500	12.172	18.264	30.436	-23.564	54.000	AVERAGE
6		2500.000	12.274	18.473	30.748	-23.252	54.000	AVERAGE

Note:

1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, 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 : 2017/08/03**
Limit : FCC_SpartC_15.209_03M_PK	**Margin : 6**
Probe : CB4_FCC_EFS_B091_1-18GHz_3M_0117 - HORIZONTAL	**Power : AC 120V/60Hz**
EUT : UHD861-P	**Note : Mode 1: Tx_802.15.1_BLE_2440MHz**

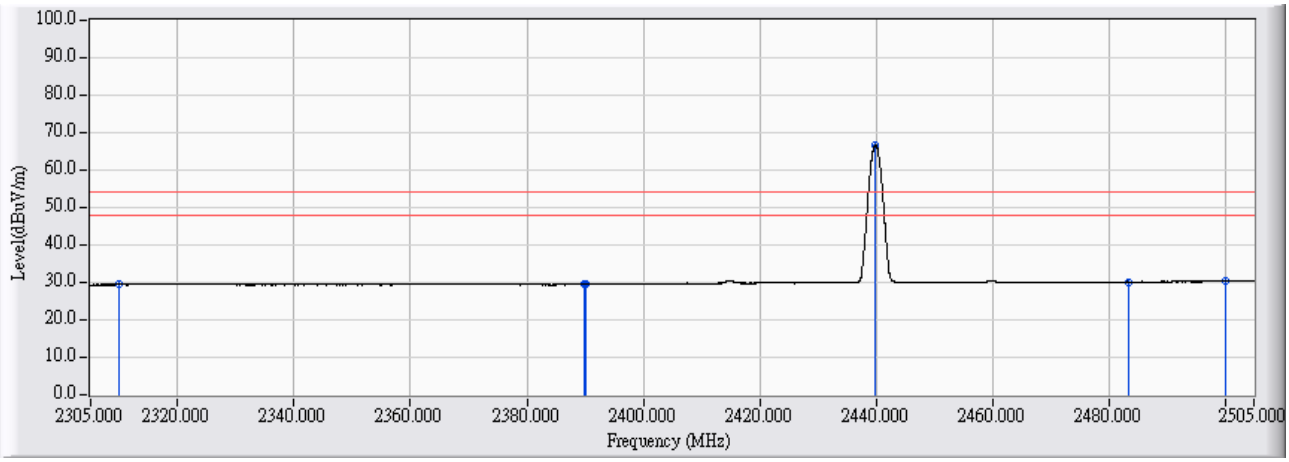


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1		2310.000	11.014	29.366	40.381	-33.619	74.000	PEAK
2		2389.731	11.542	32.793	44.335	-29.665	74.000	PEAK
3		2390.000	11.544	28.899	40.443	-33.557	74.000	PEAK
4	*	2440.166	11.882	73.674	85.555	11.555	74.000	PEAK
5		2483.500	12.172	29.663	41.835	-32.165	74.000	PEAK
6		2500.000	12.274	30.986	43.261	-30.739	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 = 3 MHz, 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 : 2017/08/03**
Limit : FCC_SpartC_15.209_03M_AV	**Margin : 6**
Probe : CB4_FCC_EFS_B091_1-18GHz_3M_0117 - HORIZONTAL	**Power : AC 120V/60Hz**
EUT : UHD861-P	**Note : Mode 1: Tx_802.15.1_BLE_2440MHz**

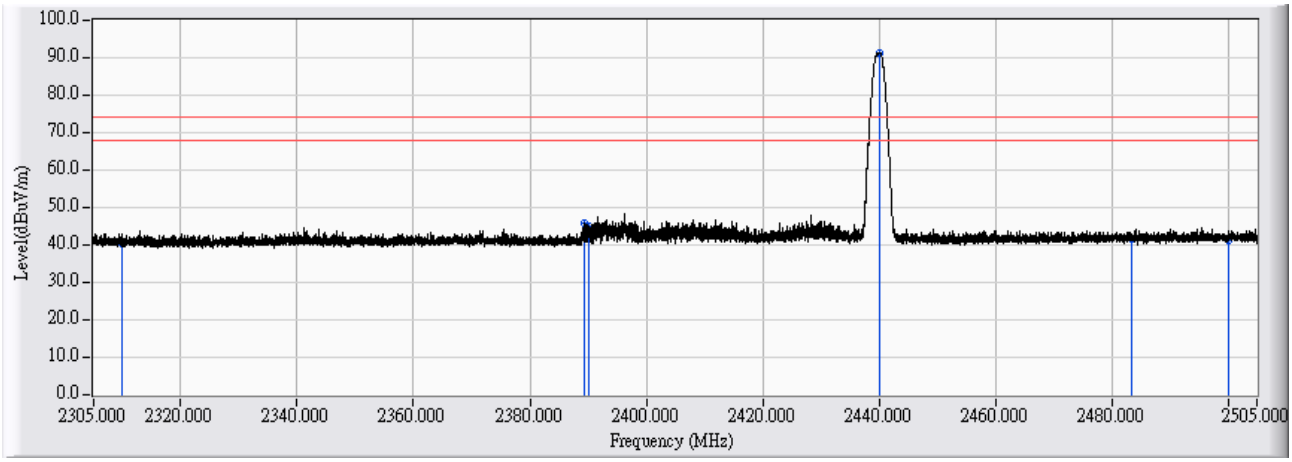


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1		2310.000	11.014	18.440	29.455	-24.545	54.000	AVERAGE
2		2389.751	11.542	17.983	29.525	-24.475	54.000	AVERAGE
3		2390.000	11.544	17.915	29.459	-24.541	54.000	AVERAGE
4	*	2439.906	11.880	54.774	66.653	12.653	54.000	AVERAGE
5		2483.500	12.172	17.987	30.159	-23.841	54.000	AVERAGE
6		2500.000	12.274	18.048	30.323	-23.677	54.000	AVERAGE

Note:

1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, 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 : 2017/08/03**
Limit : FCC_SpartC_15.209_03M_PK	**Margin : 6**
Probe : CB4_FCC_EFS_B091_1-18GHz_3M_0117 - VERTICAL	**Power : AC 120V/60Hz**
EUT : UHD861-P	**Note : Mode 1: Tx_802.15.1_BLE_2440MHz**

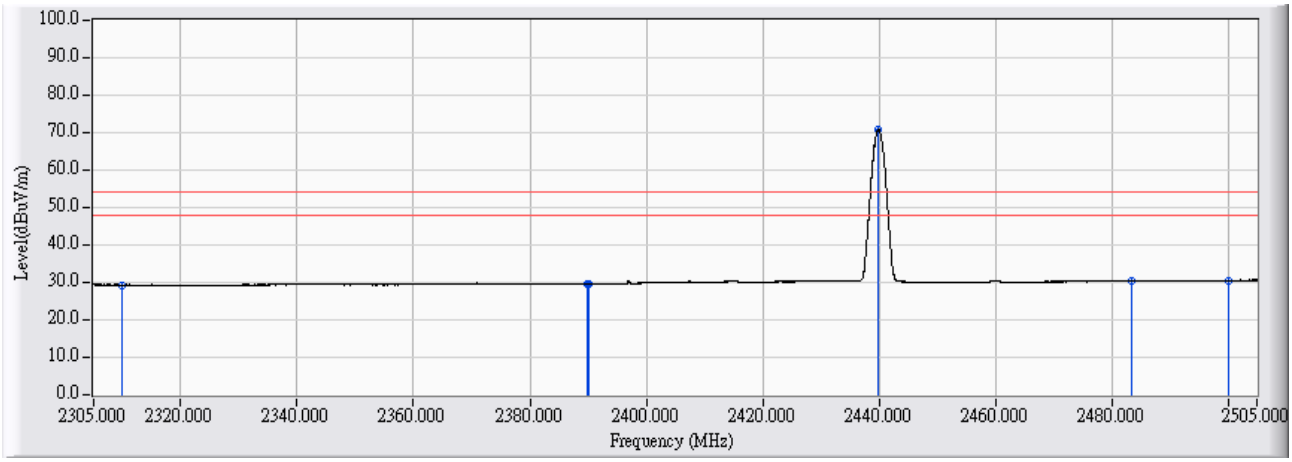


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1		2310.000	11.014	29.328	40.343	-33.657	74.000	PEAK
2		2389.332	11.539	34.416	45.955	-28.045	74.000	PEAK
3		2390.000	11.544	33.286	44.830	-29.170	74.000	PEAK
4	*	2440.206	11.882	79.356	91.237	17.237	74.000	PEAK
5		2483.500	12.172	29.601	41.773	-32.227	74.000	PEAK
6		2500.000	12.274	29.003	41.278	-32.722	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 = 3 MHz, 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 : 2017/08/03**
Limit : FCC_SpartC_15.209_03M_AV	**Margin : 6**
Probe : CB4_FCC_EFS_B091_1-18GHz_3M_0117 - VERTICAL	**Power : AC 120V/60Hz**
EUT : UHD861-P	**Note : Mode 1: Tx_802.15.1_BLE_2440MHz**

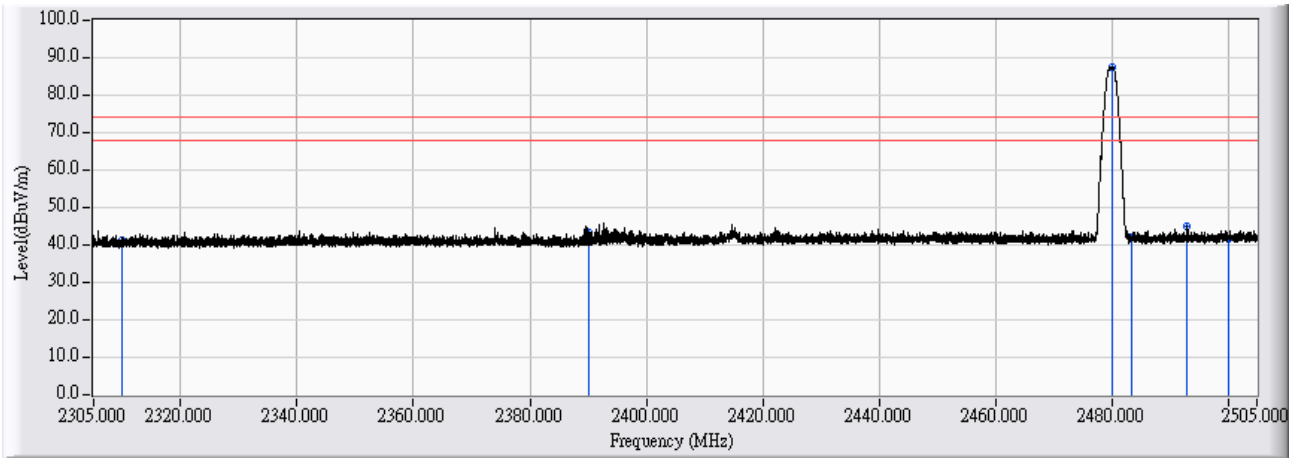


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1		2310.000	11.014	18.340	29.355	-24.645	54.000	AVERAGE
2		2389.751	11.542	18.014	29.556	-24.444	54.000	AVERAGE
3		2390.000	11.544	17.989	29.533	-24.467	54.000	AVERAGE
4	*	2439.966	11.880	58.862	70.742	16.742	54.000	AVERAGE
5		2483.500	12.172	18.209	30.381	-23.619	54.000	AVERAGE
6		2500.000	12.274	18.259	30.534	-23.466	54.000	AVERAGE

Note:

1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, 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 : 2017/08/03**
Limit : FCC_SpartC_15.209_03M_PK	**Margin : 6**
Probe : CB4_FCC_EFS_B091_1-18GHz_3M_0117 - HORIZONTAL	**Power : AC 120V/60Hz**
EUT : UHD861-P	**Note : Mode 1: Tx_802.15.1_BLE_2480MHz**

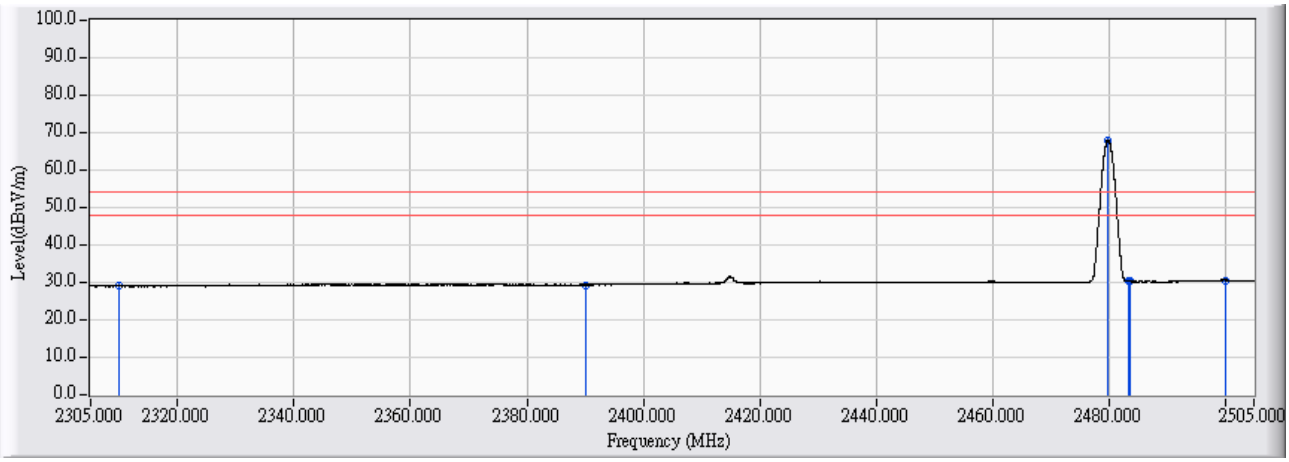


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1		2310.000	11.014	30.272	41.287	-32.713	74.000	PEAK
2		2390.000	11.544	31.597	43.141	-30.859	74.000	PEAK
3	*	2480.222	12.150	75.285	87.435	13.435	74.000	PEAK
4		2483.500	12.172	29.758	41.930	-32.070	74.000	PEAK
5		2492.941	12.236	32.964	45.199	-28.801	74.000	PEAK
6		2500.000	12.274	29.421	41.696	-32.304	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 = 3 MHz, 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 : 2017/08/03**
Limit : FCC_SpartC_15.209_03M_AV	**Margin : 6**
Probe : CB4_FCC_EFS_B091_1-18GHz_3M_0117 - HORIZONTAL	**Power : AC 120V/60Hz**
EUT : UHD861-P	**Note : Mode 1: Tx_802.15.1_BLE_2480MHz**

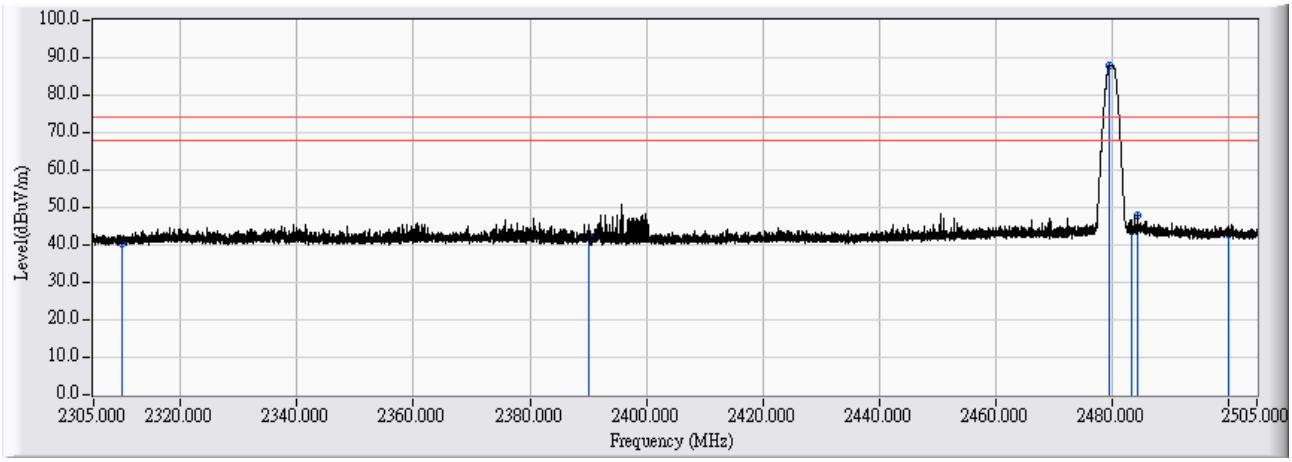


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1		2310.000	11.014	18.122	29.137	-24.863	54.000	AVERAGE
2		2390.000	11.544	17.818	29.362	-24.638	54.000	AVERAGE
3	*	2479.962	12.149	55.903	68.052	14.052	54.000	AVERAGE
4		2483.500	12.172	18.107	30.279	-23.721	54.000	AVERAGE
5		2483.602	12.172	18.153	30.326	-23.674	54.000	AVERAGE
6		2500.000	12.274	18.338	30.613	-23.387	54.000	AVERAGE

Note:

1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, 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 : 2017/08/03**
Limit : FCC_SpartC_15.209_03M_PK	**Margin : 6**
Probe : CB4_FCC_EFS_B091_1-18GHz_3M_0117 - VERTICAL	**Power : AC 120V/60Hz**
EUT : UHD861-P	**Note : Mode 1: Tx_802.15.1_BLE_2480MHz**

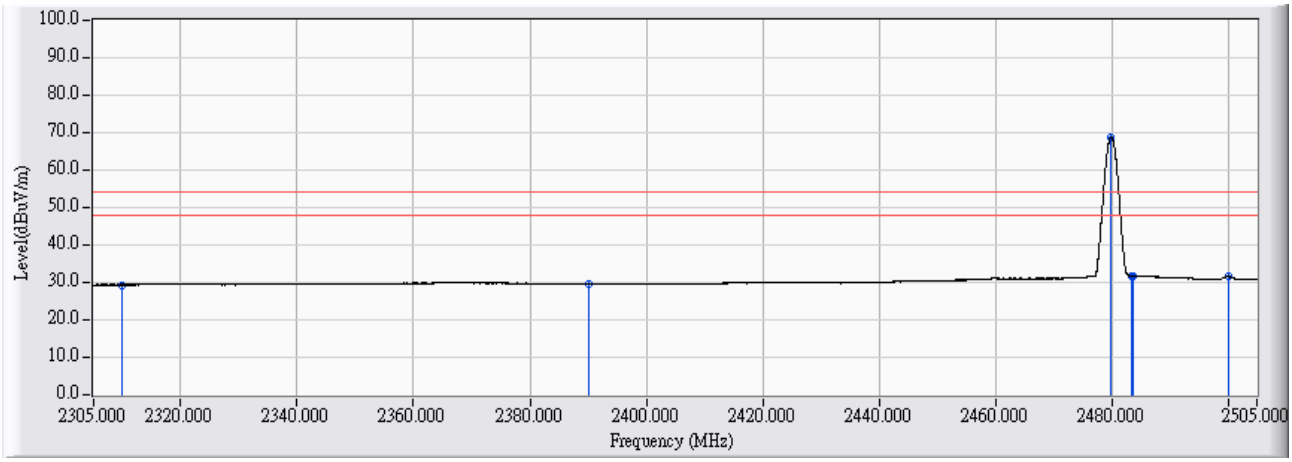


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1		2310.000	11.014	29.368	40.383	-33.617	74.000	PEAK
2		2390.000	11.544	31.031	42.575	-31.425	74.000	PEAK
3	*	2479.742	12.147	75.906	88.053	14.053	74.000	PEAK
4		2483.500	12.172	31.630	43.802	-30.198	74.000	PEAK
5		2484.542	12.179	35.603	47.782	-26.218	74.000	PEAK
6		2500.000	12.274	30.688	42.963	-31.037	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 = 3 MHz, 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 : 2017/08/03**
Limit : FCC_SpartC_15.209_03M_AV	**Margin : 6**
Probe : CB4_FCC_EFS_B091_1-18GHz_3M_0117 - VERTICAL	**Power : AC 120V/60Hz**
EUT : UHD861-P	**Note : Mode 1: Tx_802.15.1_BLE_2480MHz**



		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1		2310.000	11.014	18.274	29.289	-24.711	54.000	AVERAGE
2		2390.000	11.544	18.004	29.548	-24.452	54.000	AVERAGE
3	*	2479.882	12.148	56.723	68.871	14.871	54.000	AVERAGE
4		2483.500	12.172	19.570	31.742	-22.258	54.000	AVERAGE
5		2483.602	12.172	19.597	31.770	-22.230	54.000	AVERAGE
6		2500.000	12.274	19.279	31.554	-22.446	54.000	AVERAGE

Note:

1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, 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.

7. Occupied Bandwidth

7.1. Test Equipment

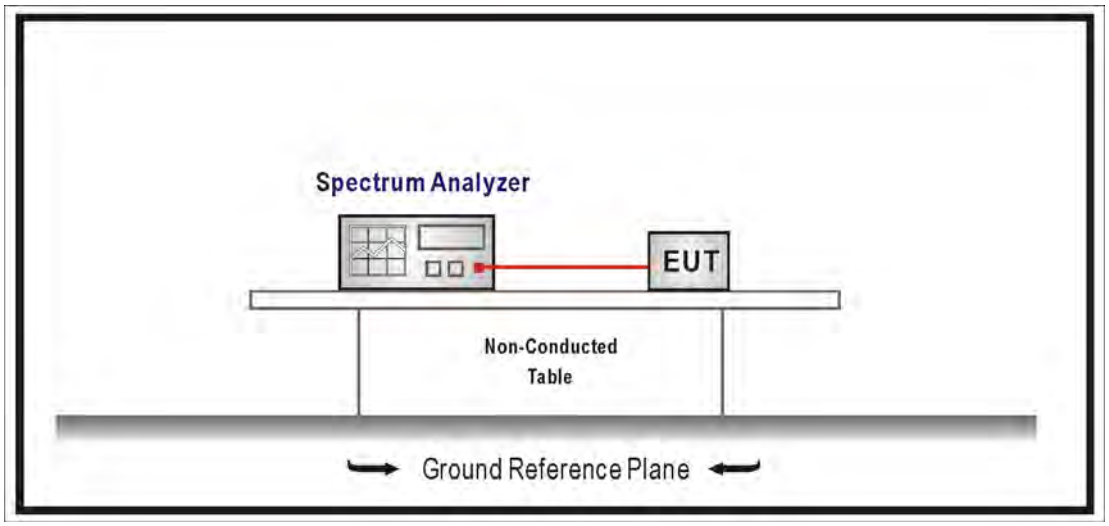
The following test equipment is used during the test:

Occupied Bandwidth / SR10-H

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

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

7.2. Test Setup



7.3. Limits

The 6 dB bandwidth must be greater than 500 kHz.

7.4. Test Procedures

The EUT was setup according to ANSI C63.10: 2013; tested according to DTS test procedure of KDB558074 D01 V04 for compliance to FCC 47CFR 15.247 requirements.

Set RBW = 1% of EBW, Span greater than RBW.

7.5. Test Specification

According to FCC Part 15 Subpart C Paragraph 15.247

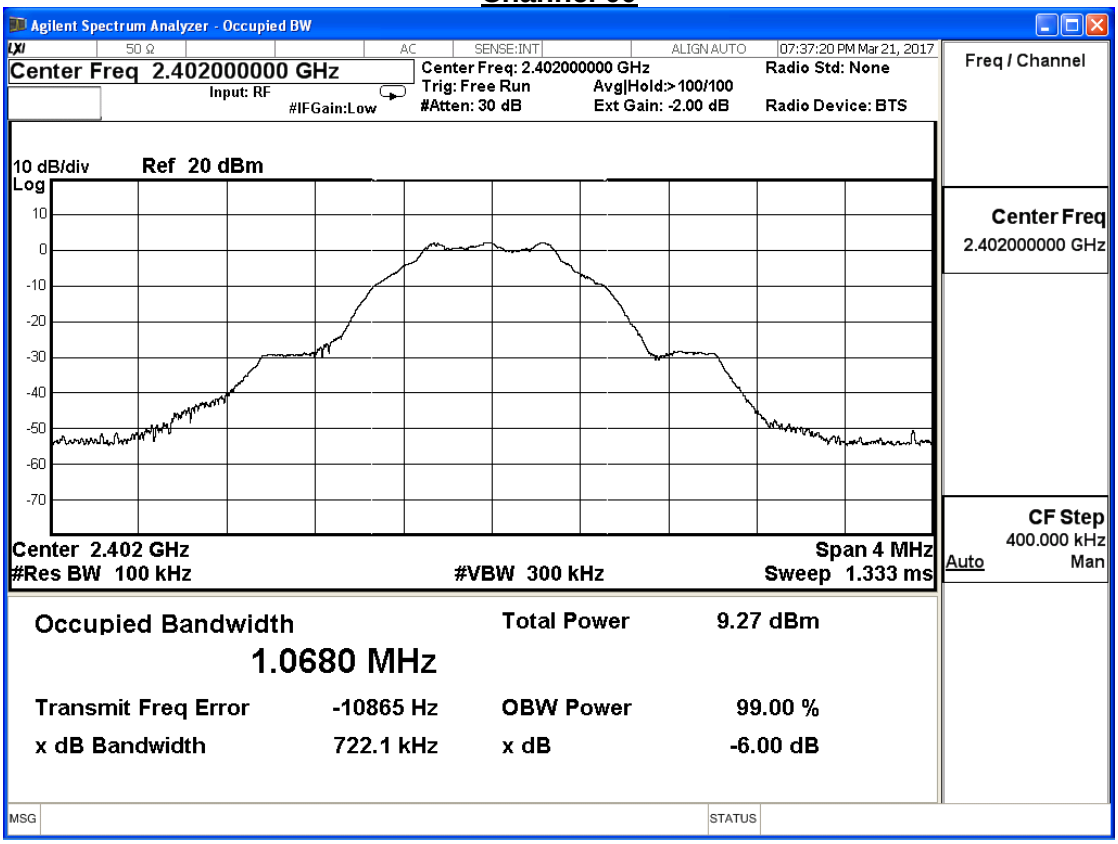
7.6. Test Result

Product	UHD861-P		
Test Item	Occupied Bandwidth		
Test Mode	Mode 1: Tx		
Date of Test	2017/03/21	Test Site	SR10-H

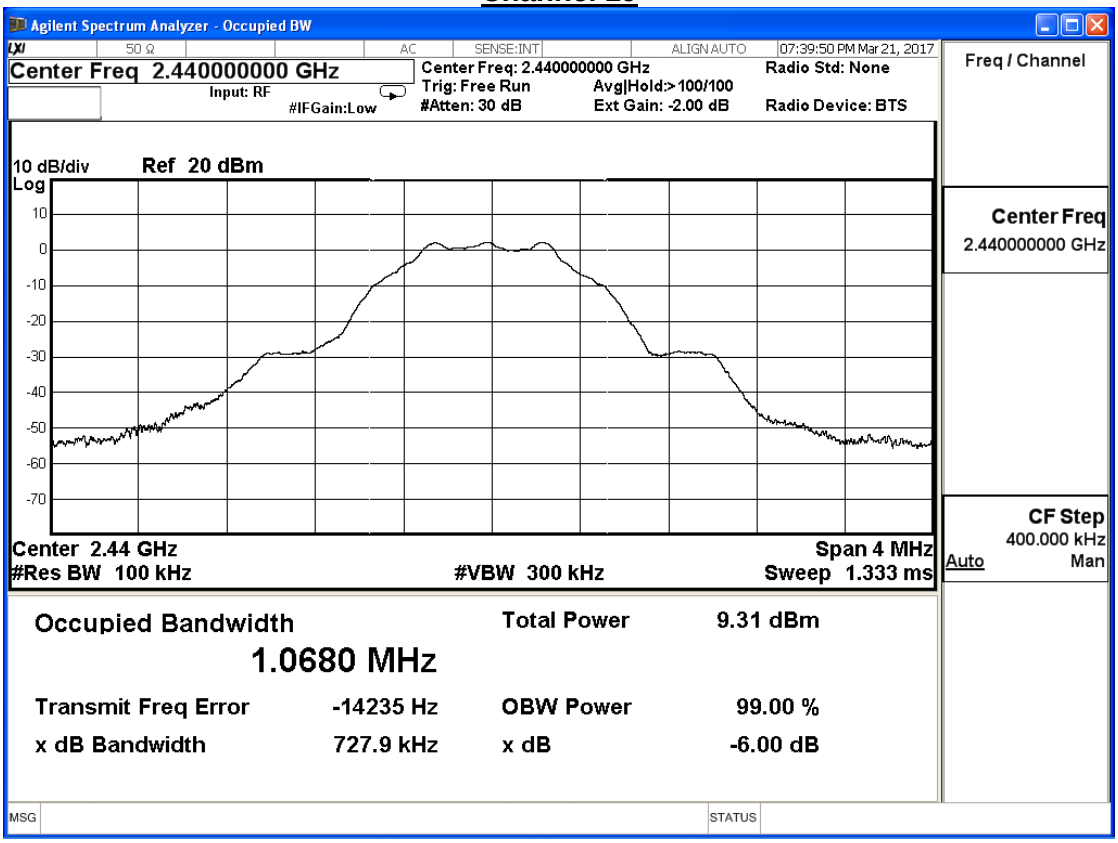
GFSK

Channel No.	Frequency (MHz)	Measure Level (KHz)	Limit (MHz)	Result
00	2402	722.10	≧0.5	Pass
19	2440	727.90	≧0.5	Pass
39	2480	727.30	≧0.5	Pass

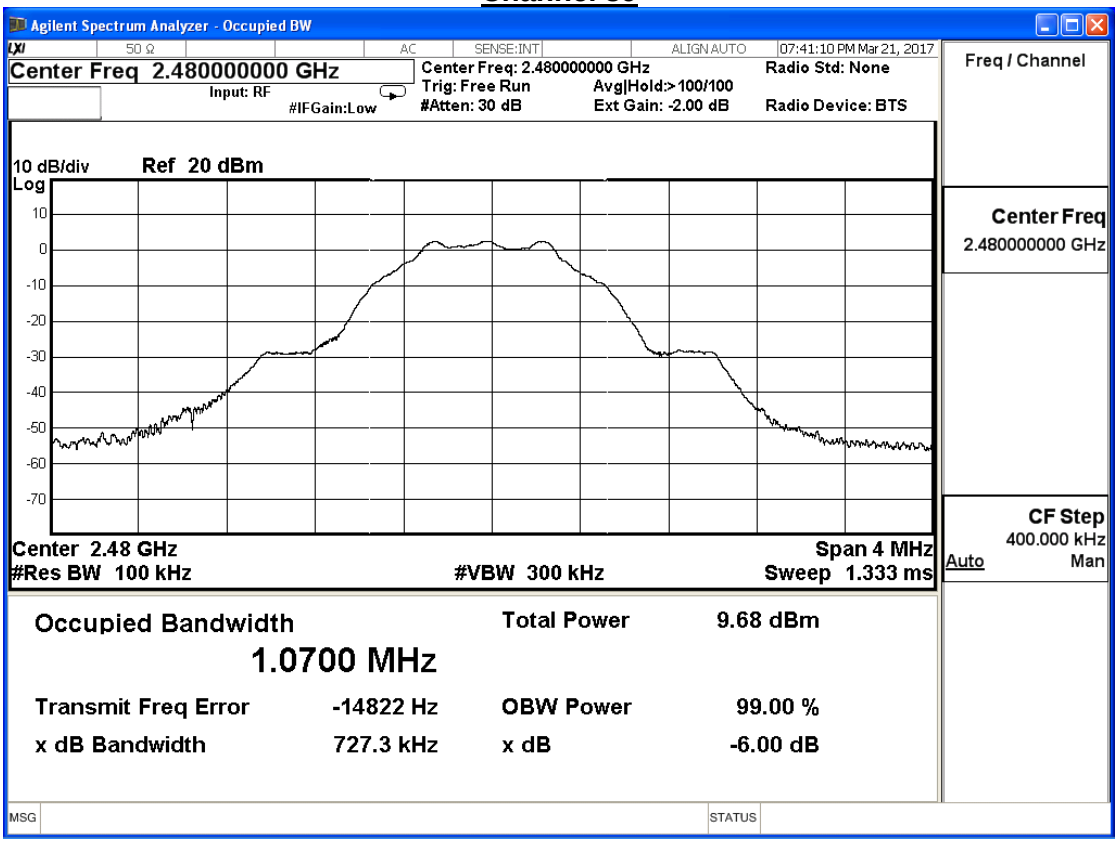
Channel 00



Channel 19



Channel 39



8. Power Density

8.1. Test Equipment

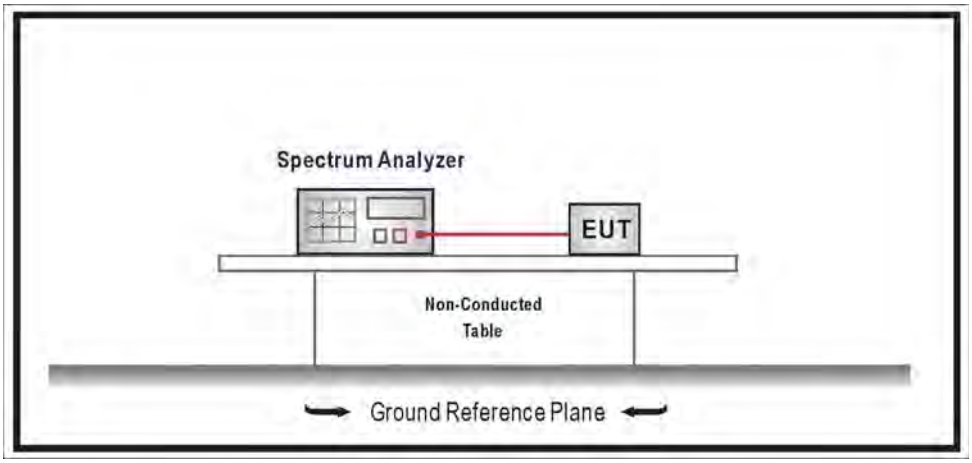
The following test equipment is used during the test:

Power Density / SR10-H

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

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

8.2. Test Setup



8.3. Limits

The peak power spectral density conducted from the intentional radiated to the antenna shall not be greater than +8dBm in any 3kHz band during any time interval of continuous transmission.

8.4. Test Procedures

The EUT was setup according to ANSI C63.10: 2013; tested according to DTS test procedure of KDB558074 D01 V04 for compliance to FCC 47CFR 15.247 requirements.

8.5. Test Specification

According to FCC Part 15 Subpart C Paragraph 15.247

8.6. Uncertainty

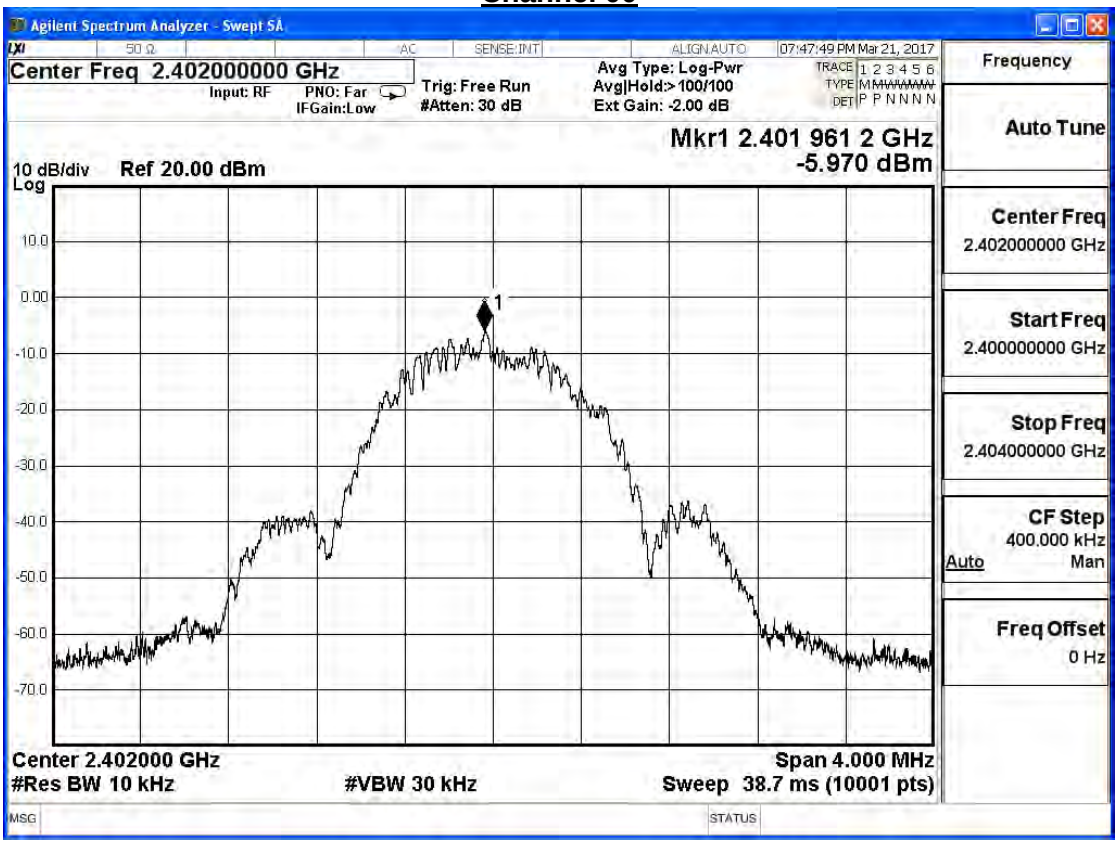
The measurement uncertainty is defined as ±1.27dB.

8.7. Test Result

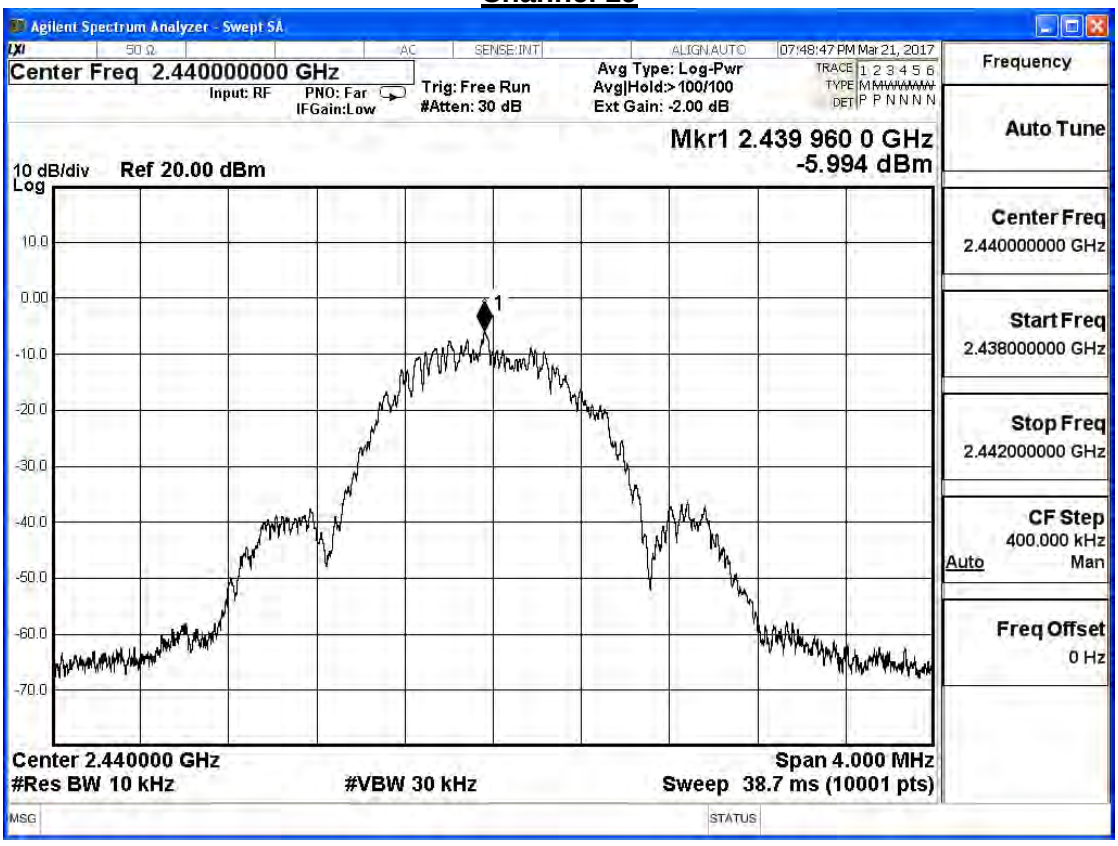
Product	UHD861-P		
Test Item	Power Density		
Test Mode	Mode 1: Tx		
Date of Test	2017/03/21	Test Site	SR10-H

Channel No.	Frequency (MHz)	Measure Level(dBm)	Limit (dBm)	Result
00	2402	-5.970	≦8	Pass
19	2440	-5.994	≦8	Pass
39	2480	-5.697	≦8	Pass

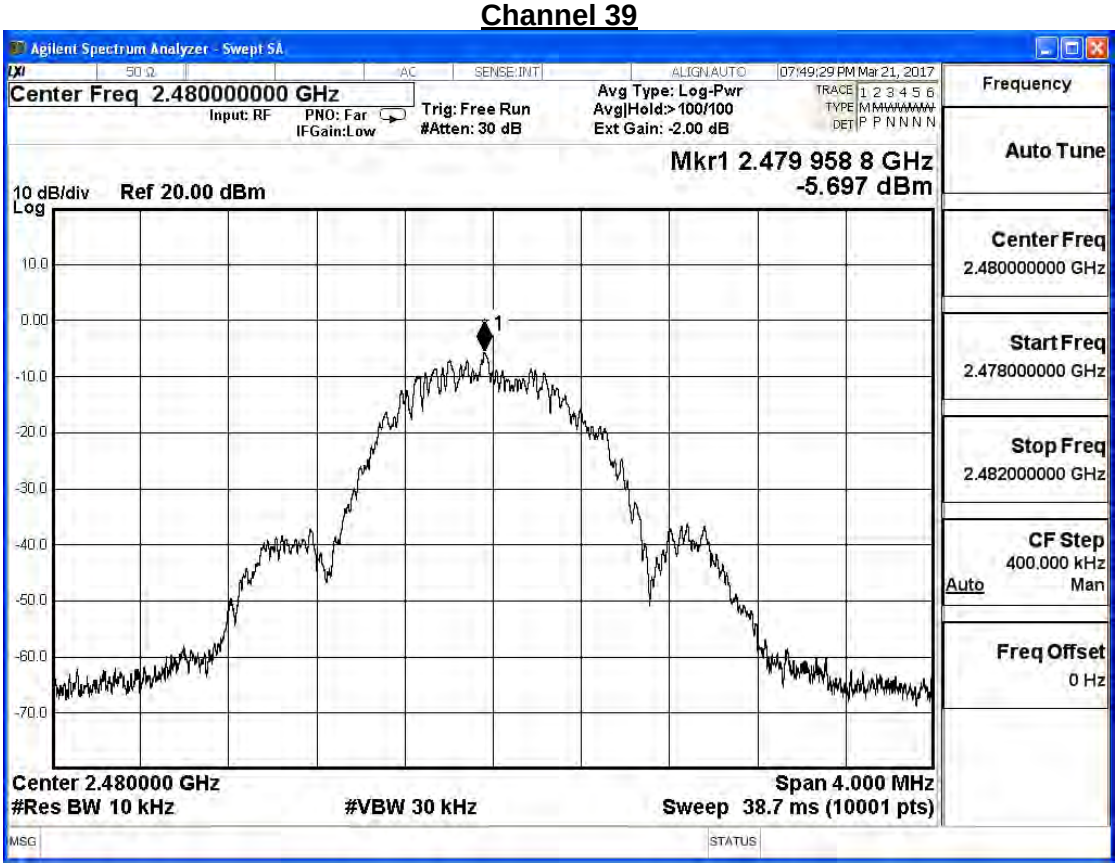
Channel 00



Channel 19



Channel 39



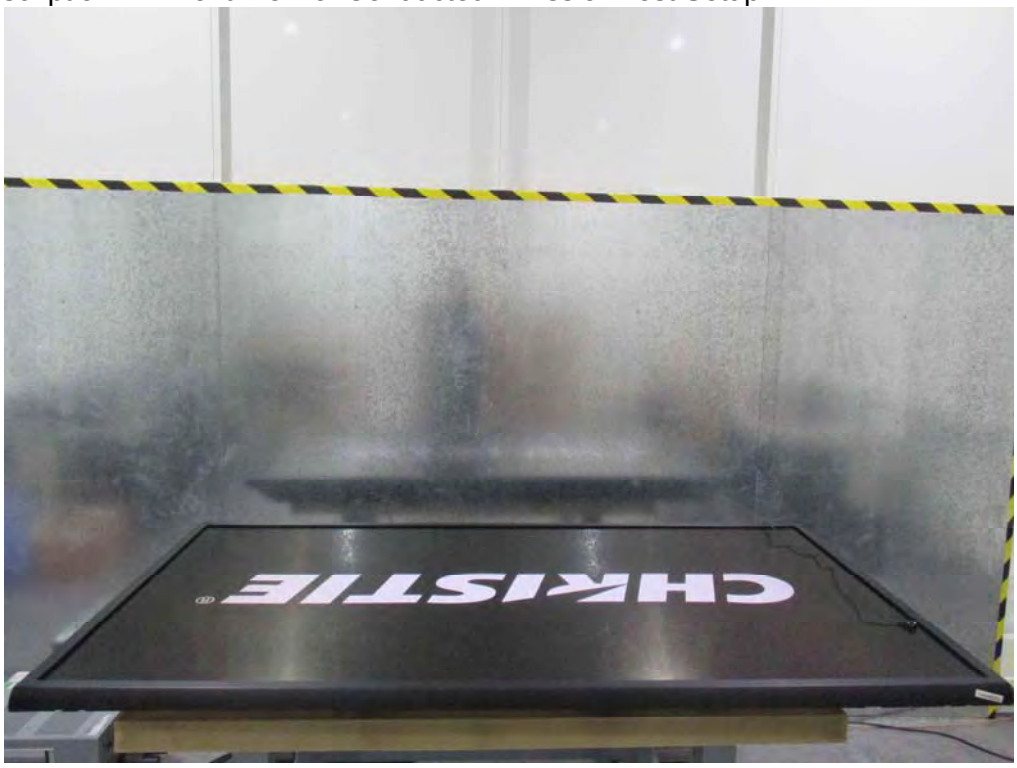
Attachment 1

➢ Test Setup Photograph

<Conducted Emission>

Test Mode ： Mode 1: Tx

Description： Front View of Conducted Emission Test Setup



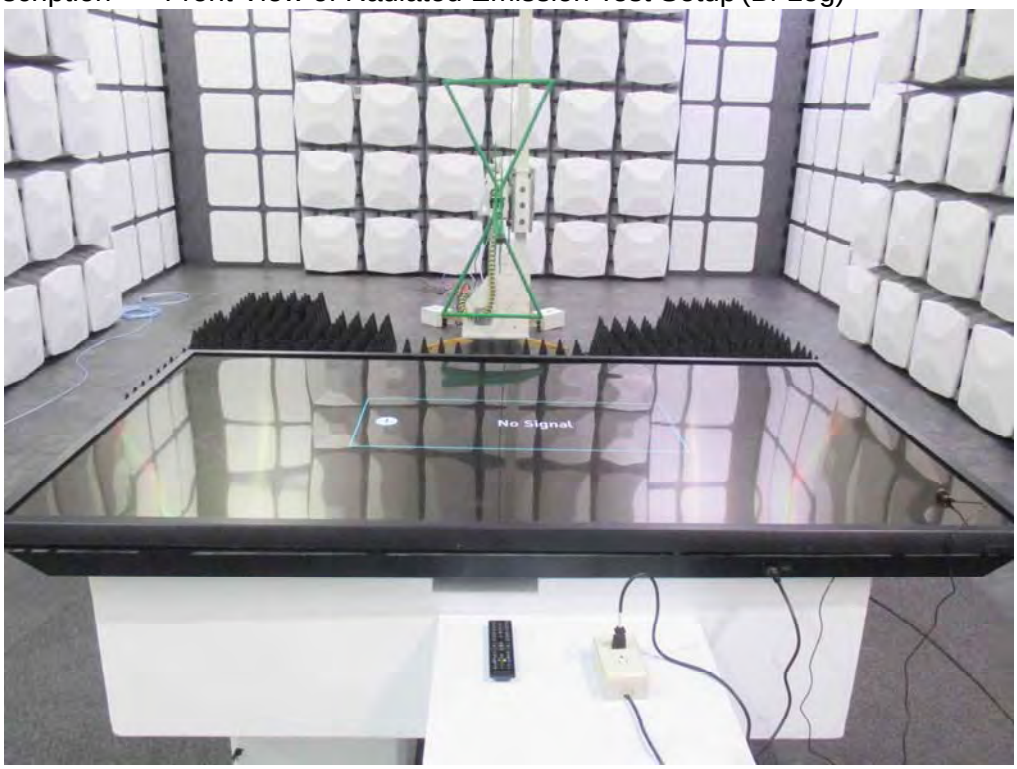
Test Mode ： Mode 1: Tx

Description： Back View of Conducted Emission Test Setup

<Radiated Emission>

Test Mode ： Mode 1: Tx

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



Test Mode ： Mode 1: Tx

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

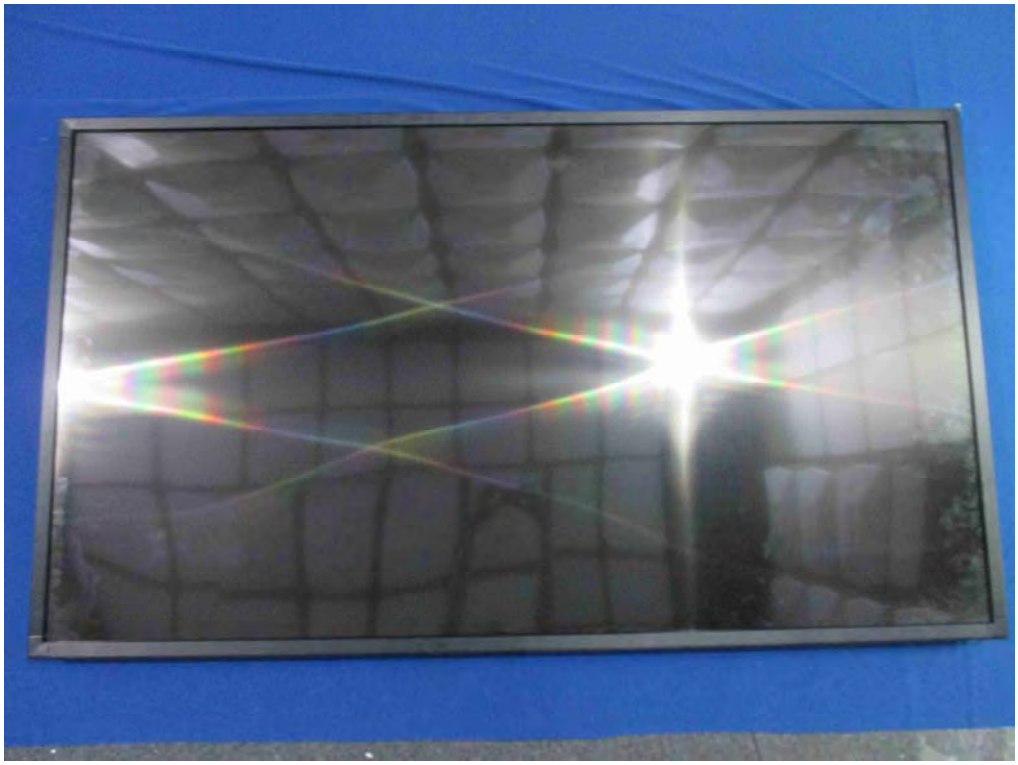
Test Mode ： Mode 1: Tx
Description： Front View of Radiated Emission Test Setup (Horn)

Test Mode ： Mode 1: Tx
Description： Back View of Radiated Emission Test Setup (Horn)

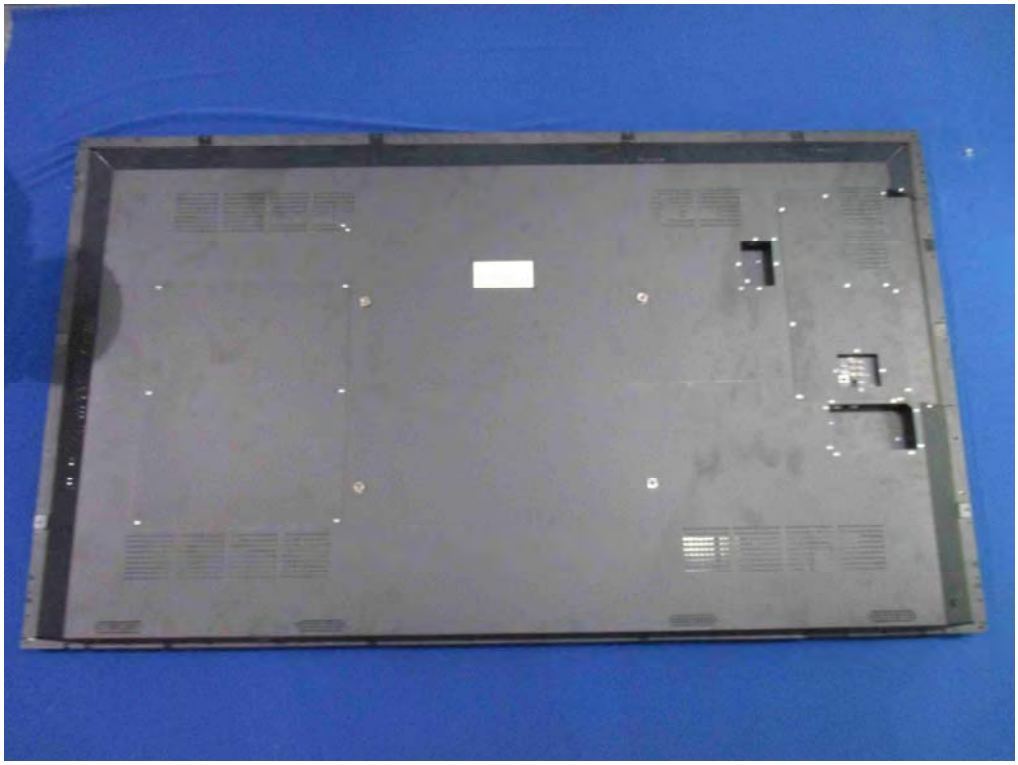
Attachment 2

➢ EUT External Photograph

(1) EUT Photo

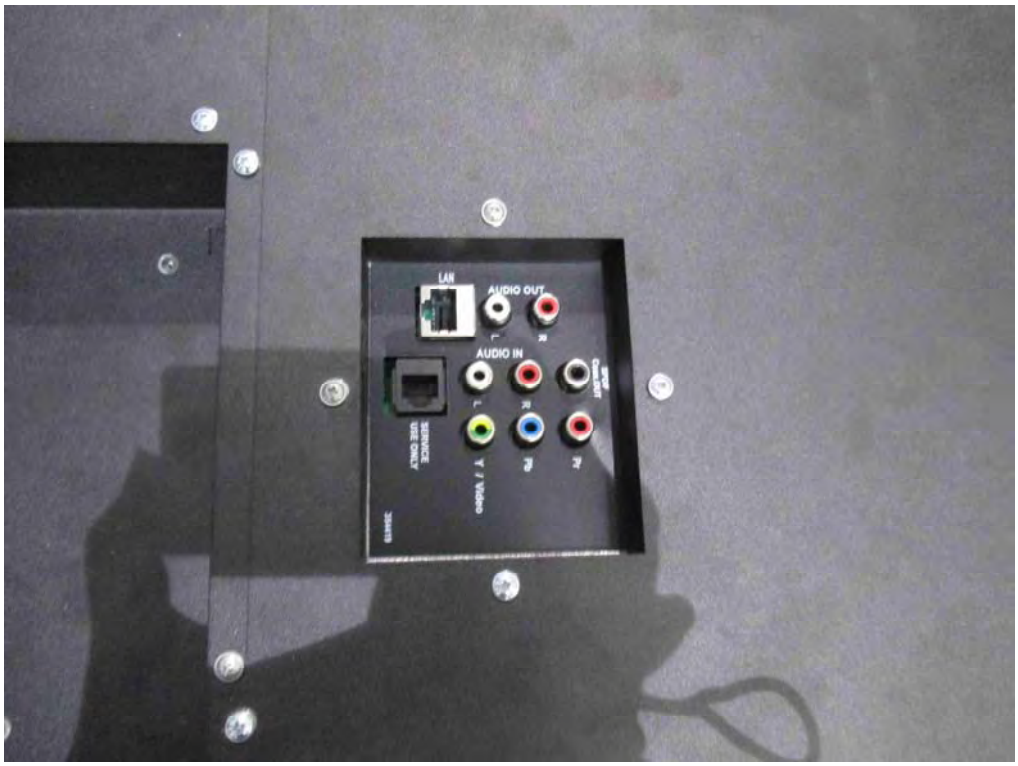


(2) EUT Photo



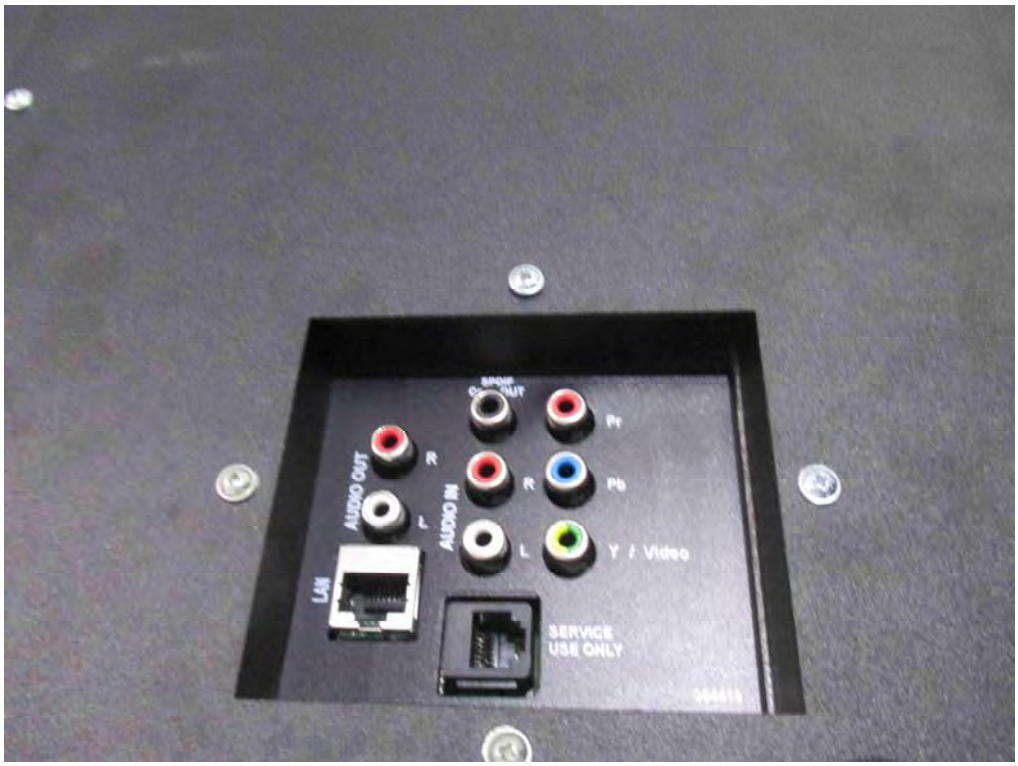
(3) EUT Photo

(4) EUT Photo

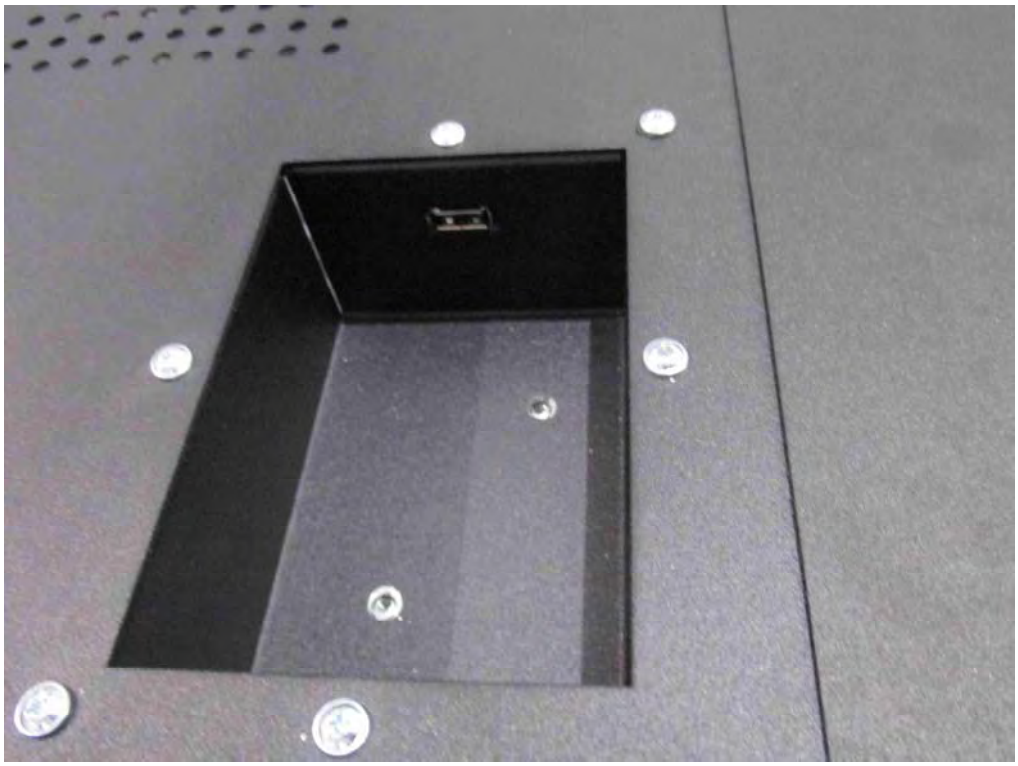


(5) EUT Photo

(6) EUT Photo



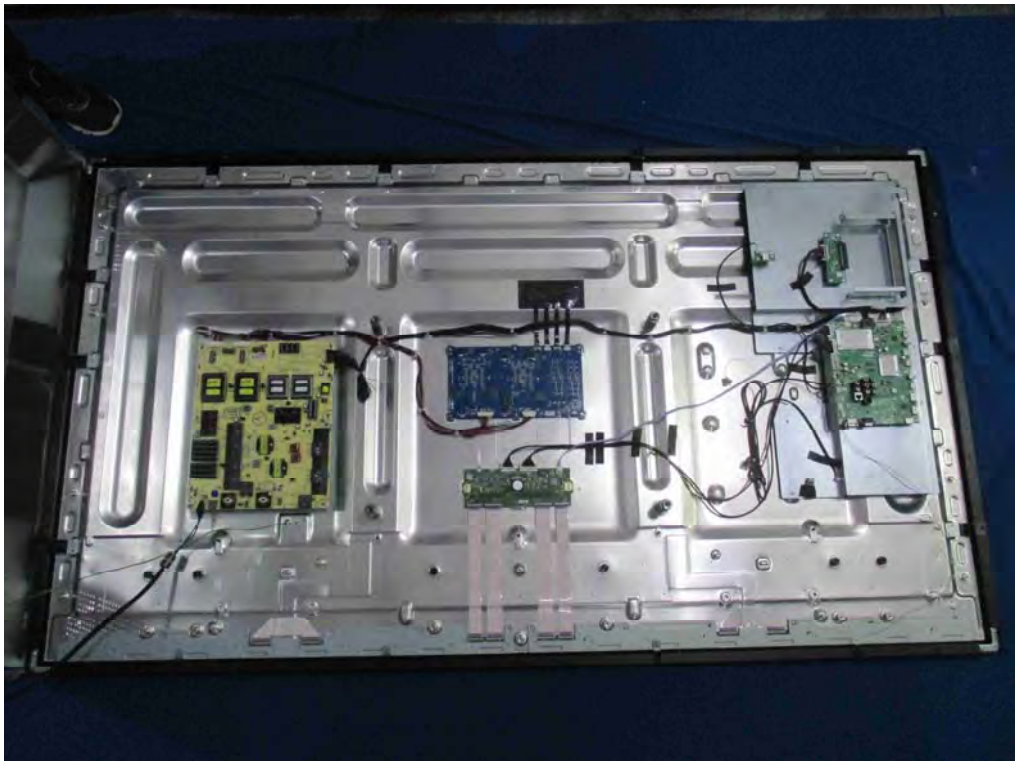
(7) EUT Photo



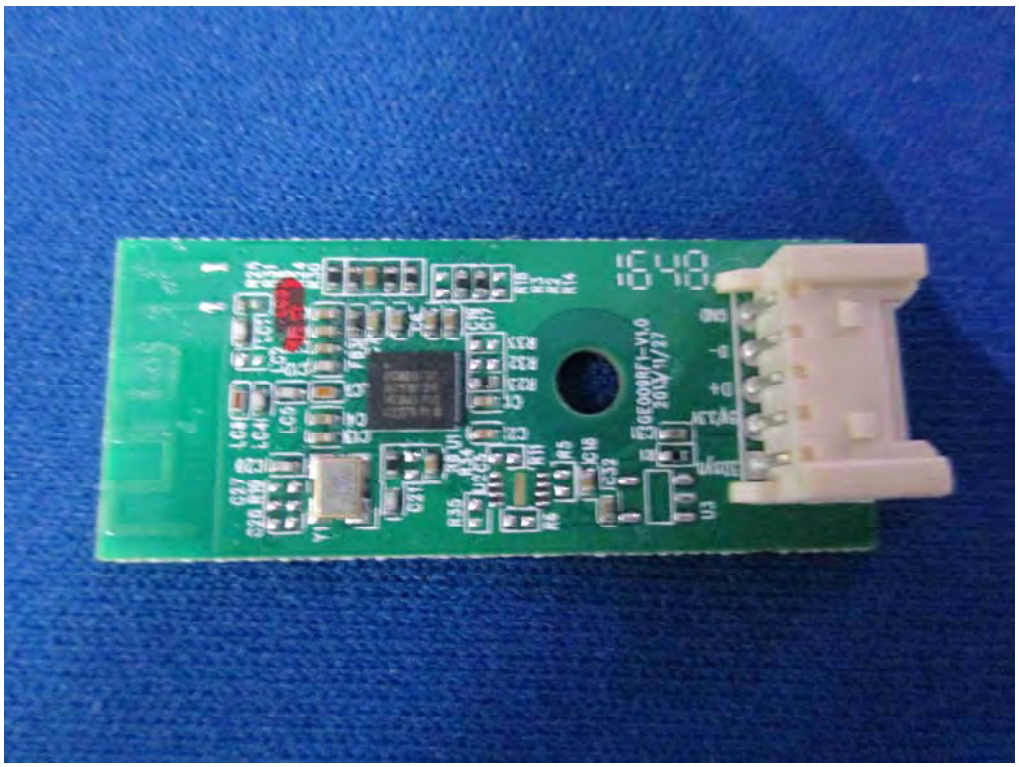
Attachment 3

- **EUT Internal Photograph**

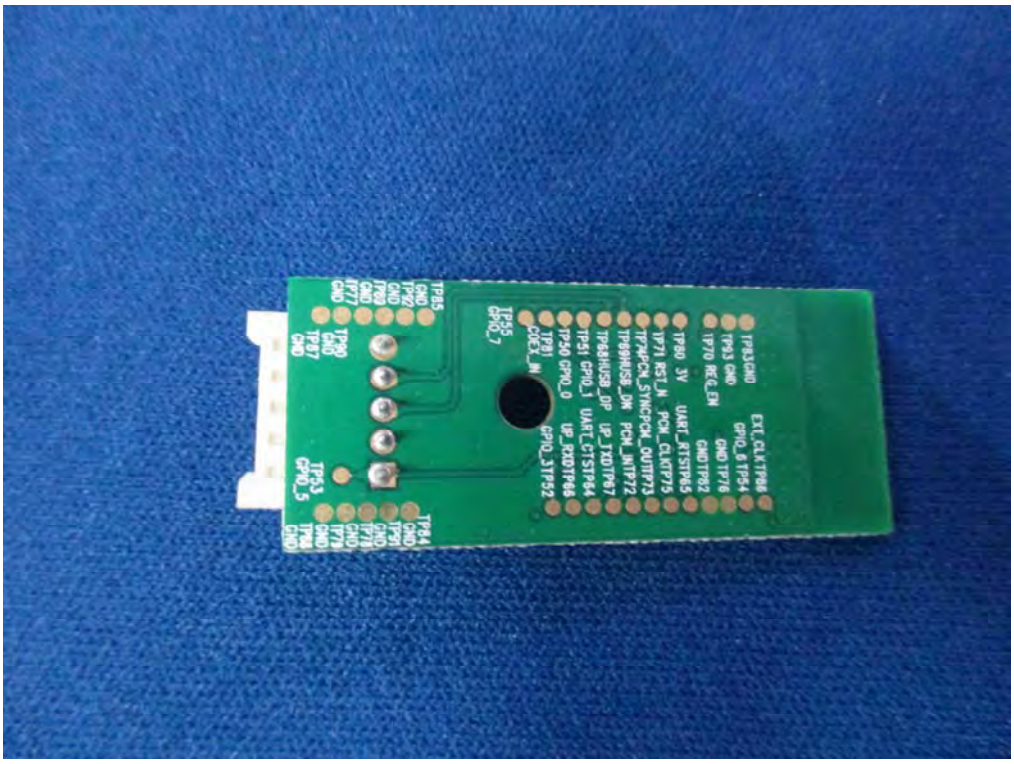
(1) EUT Photo



(2) EUT Photo



(3) EUT Photo



(4) EUT Photo (Antenna Location)