FCC Test Report

Product Name	：	UHD751-P
Trade Name	：	Vestel
Model No.	：	UHD751-P
FCC ID.	：	XU6-UHD751P

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

Date of Receipt	：	Mar. 21, 2017
Issued Date	：	Aug. 21, 2017
Report No.	：	1770382R-RFUSP01V00-C
Report Version	：	V3.0

Testing Laboratory
3024

Test Report Certification

Issued Date : Aug. 21, 2017
Report No. : 1770382R-RFUSP01V00-C

Product Name	:	UHD751-P
Applicant	:	VESTEL TRADE CO.
Address	:	Organize Sanayi Bölgesi (45030) Manisa/Türkiye
Manufacturer	:	VESTEL TRADE CO.
Model No.	:	UHD751-P
FCC ID.	:	XU6-UHD751P
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 ANSI C63.10: 2013
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
1770382R-RFUSP01V00-C	V3.0	Initial issue of report	Aug. 21, 2017

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1. General Information

1.1. EUT Description

Product Name	UHD751-P
Trade Name	Vestel
Model No.	UHD751-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 UHD751-P 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.

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	Mode 1: Tx

Test Items	Modulation	Channel	Antenna	Result
Conducted Emission	GFSK	19	0	Complies
Peak Power Output	GFSK	00/19/39	0	Complies
Radiated Emission	GFSK	00/19/39	0	Complies
RF antenna conducted test	GFSK	00/19/39	0	Complies
Radiated Emission Band Edge	GFSK	00/19/39	0	Complies
Occupied Bandwidth	GFSK	00/19/39	0	Complies
Power Density	GFSK	00/19/39	0	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

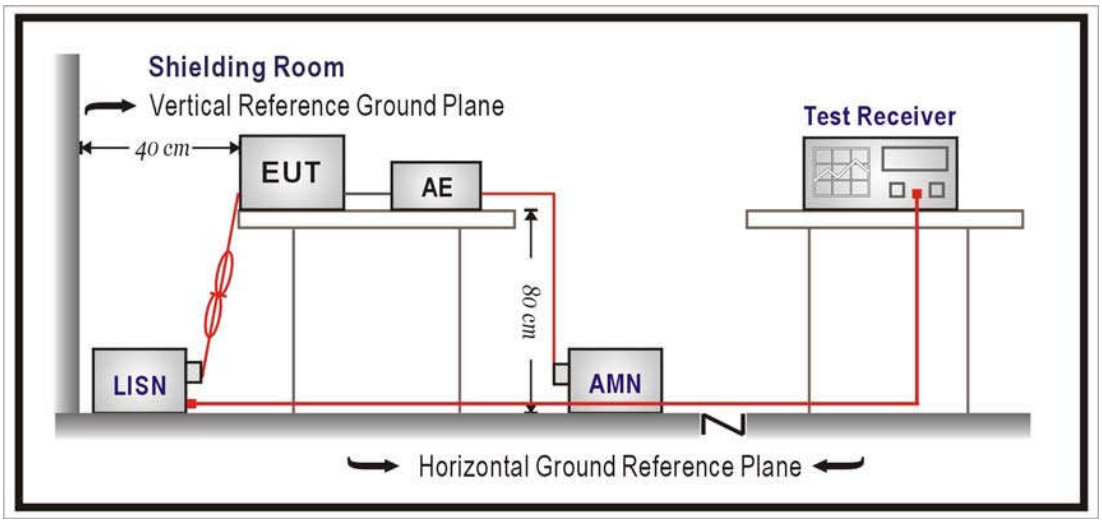
The following test equipment are used during the test:

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

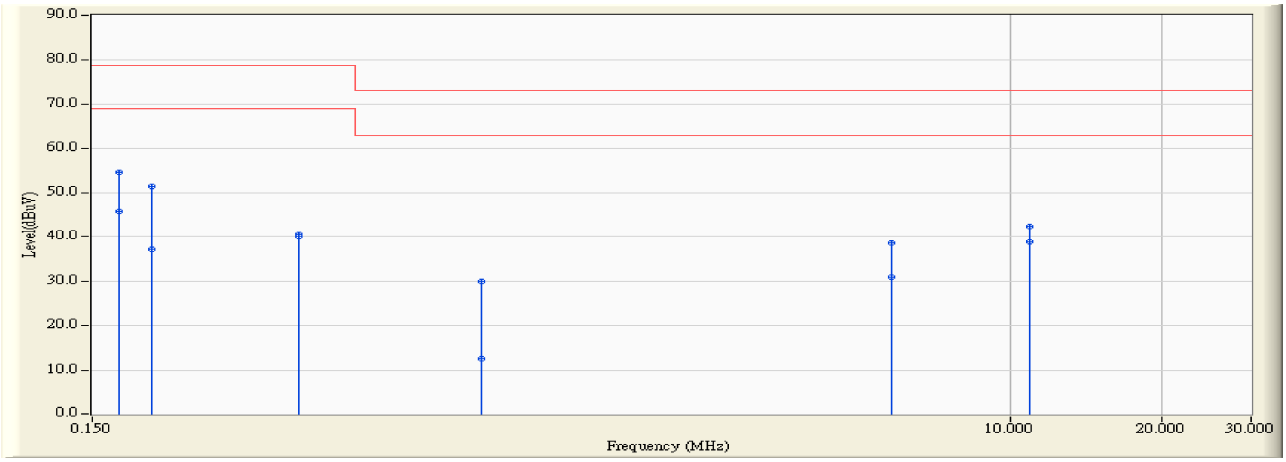
According to FCC Part 15 Subpart C Paragraph 15.207: 2015

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 : UHD751-P	**Note : Mode 1: Tx_802.15.1_2440MHz**

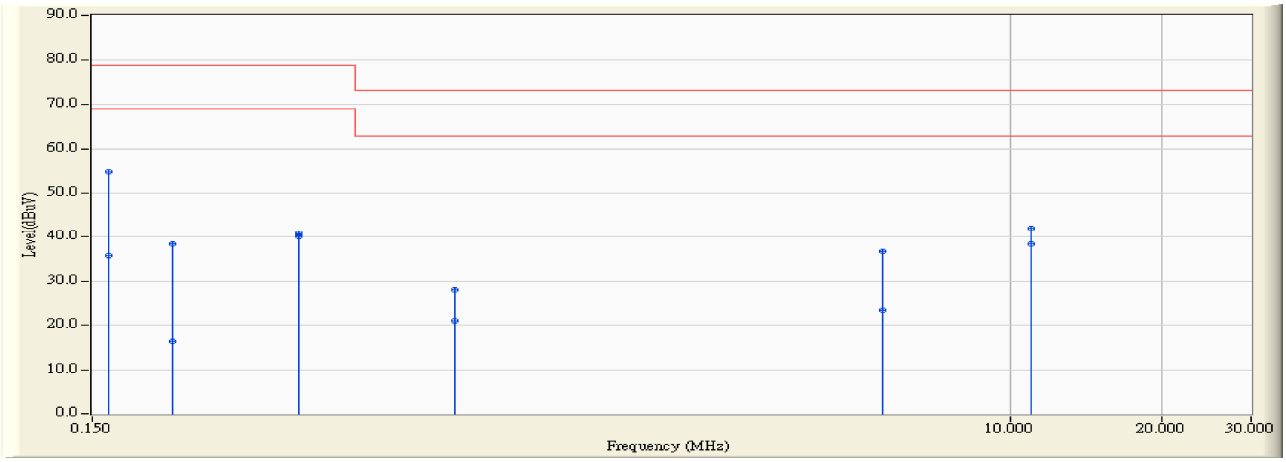


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV)	Margin (dB)	Limit (dBuV)	Detector Type
1		0.170	9.753	44.840	54.593	-24.407	79.000	QUASIPEAK
2	*	0.170	9.753	36.210	45.963	-20.037	66.000	AVERAGE
3		0.197	9.750	41.740	51.490	-27.510	79.000	QUASIPEAK
4		0.197	9.750	27.490	37.240	-28.760	66.000	AVERAGE
5		0.384	9.732	30.790	40.522	-38.478	79.000	QUASIPEAK
6		0.384	9.732	30.310	40.042	-25.958	66.000	AVERAGE
7		0.888	9.799	20.000	29.799	-43.201	73.000	QUASIPEAK
8		0.888	9.799	2.670	12.469	-47.531	60.000	AVERAGE
9		5.802	9.955	28.650	38.605	-34.395	73.000	QUASIPEAK
10		5.802	9.955	20.910	30.865	-29.135	60.000	AVERAGE
11		10.869	10.145	32.260	42.406	-30.594	73.000	QUASIPEAK
12		10.869	10.145	28.670	38.816	-21.184	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 : UHD751-P	**Note : Mode 1: Tx_802.15.1_2440MHz**



		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV)	Margin (dB)	Limit (dBuV)	Detector Type
1		0.162	9.754	45.060	54.814	-24.186	79.000	QUASIPEAK
2		0.162	9.754	25.910	35.664	-30.336	66.000	AVERAGE
3		0.216	9.750	28.580	38.330	-40.670	79.000	QUASIPEAK
4		0.216	9.750	6.680	16.430	-49.570	66.000	AVERAGE
5		0.384	9.750	31.050	40.800	-38.200	79.000	QUASIPEAK
6		0.384	9.750	30.310	40.060	-25.940	66.000	AVERAGE
7		0.787	9.788	18.200	27.988	-45.012	73.000	QUASIPEAK
8		0.787	9.788	11.130	20.918	-39.082	60.000	AVERAGE
9		5.572	9.892	26.680	36.572	-36.428	73.000	QUASIPEAK
10		5.572	9.892	13.430	23.322	-36.678	60.000	AVERAGE
11		11.002	10.182	31.780	41.962	-31.038	73.000	QUASIPEAK
12	*	11.002	10.182	28.280	38.462	-21.538	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

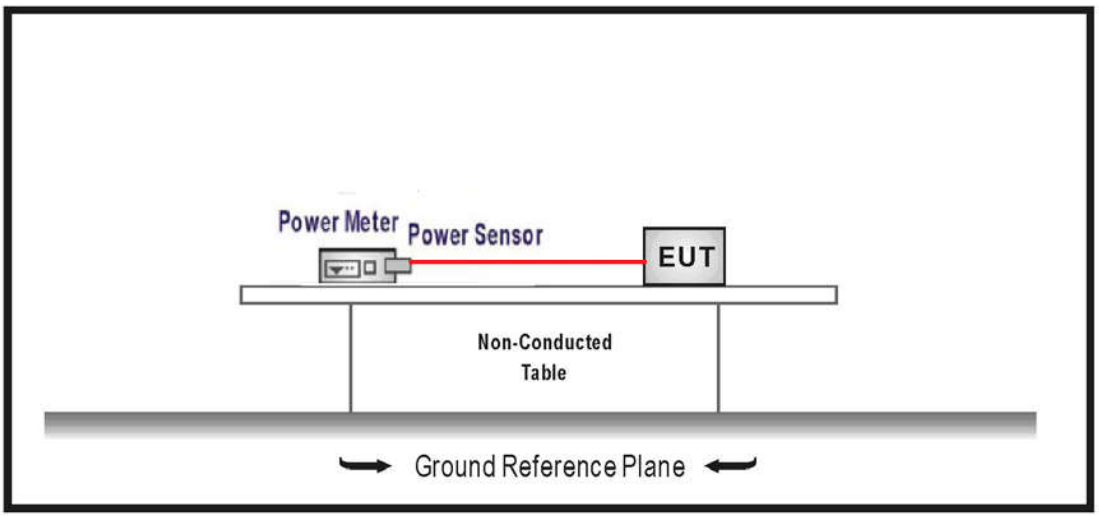
The following test equipment is used during the test:

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	UHD751-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:

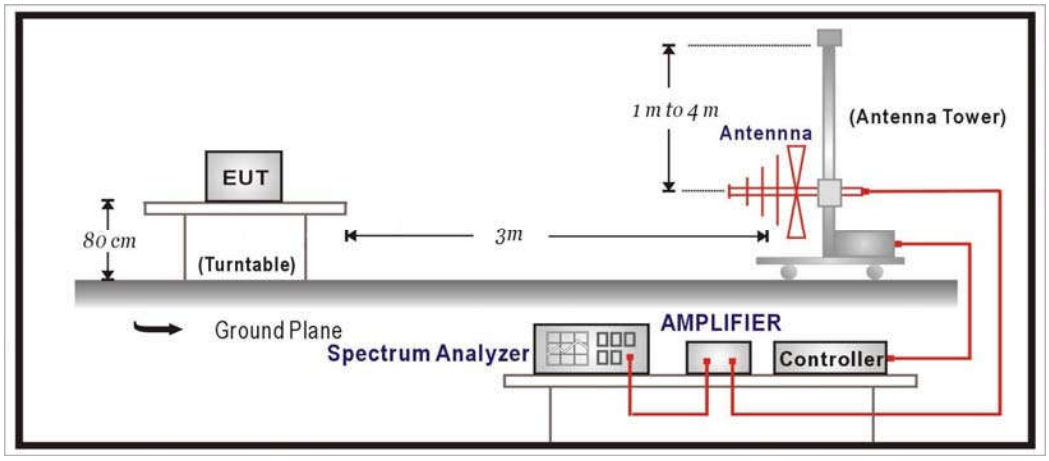
Radiated Emission / CB4-H

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

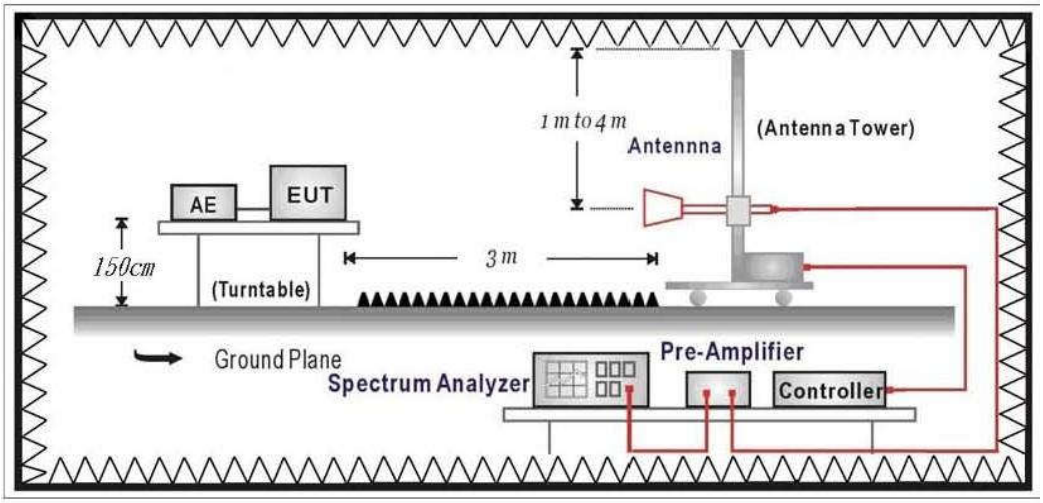
Note: All equipment that need to calibrate are with calibration period of 1 year.

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.

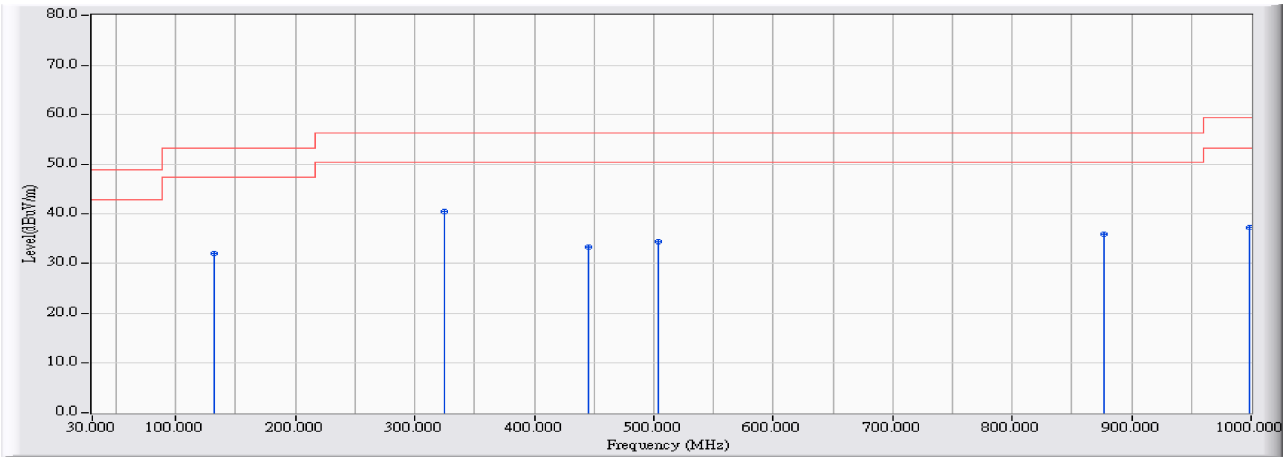
4.5. Test Specification

According to FCC Part 15 Subpart C Paragraph 15.247

4.6. Test Result

30MHz-1GHz Spurious

Site : CB4-H	**Time : 2017/08/01**
Limit : FCC_CLASS_A_03M_QP	**Margin : 6**
Probe : CB4_FCC_EFS_S2_30M-1GHz_1116 - HORIZONTAL	**Power : AC 120V/60Hz**
EUT : UHD751-P	**Note : Mode 1: Tx_802.15.1_2440MHz**

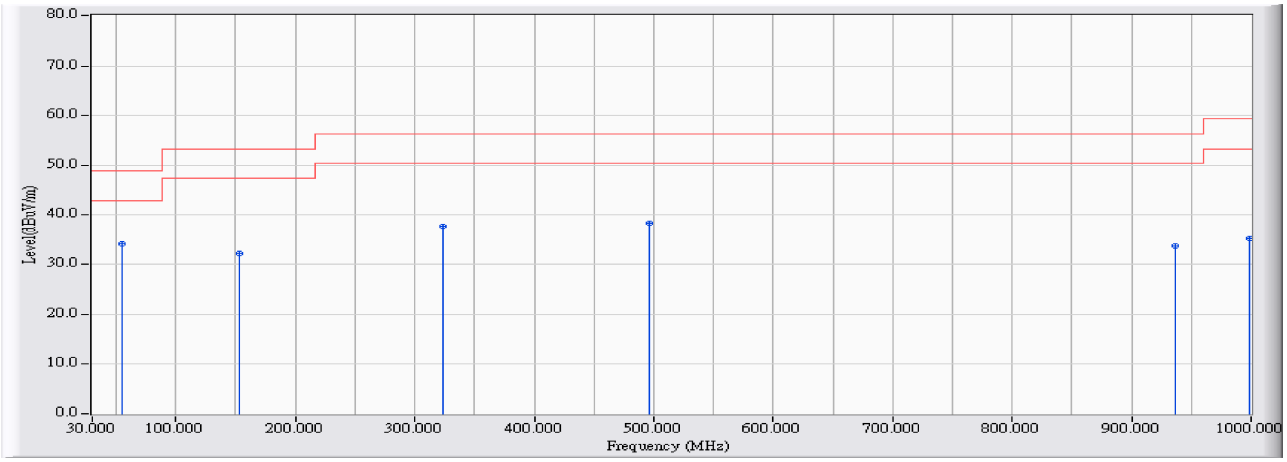


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1		131.646	-21.341	53.273	31.931	-21.569	53.500	QUASIPEAK
2	*	324.754	-18.845	59.468	40.624	-15.776	56.400	QUASIPEAK
3		444.828	-15.271	48.438	33.167	-23.233	56.400	QUASIPEAK
4		503.216	-14.282	48.553	34.271	-22.129	56.400	QUASIPEAK
5		876.531	-9.589	45.507	35.917	-20.483	56.400	QUASIPEAK
6		998.448	-7.453	44.745	37.292	-22.208	59.500	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 : 2017/08/01**
Limit : FCC_CLASS_A_03M_QP	**Margin : 6**
Probe : CB4_FCC_EFS_S2_30M-1GHz_1116 - VERTICAL	**Power : AC 120V/60Hz**
EUT : UHD751-P	**Note : Mode 1: Tx_802.15.1_2440MHz**



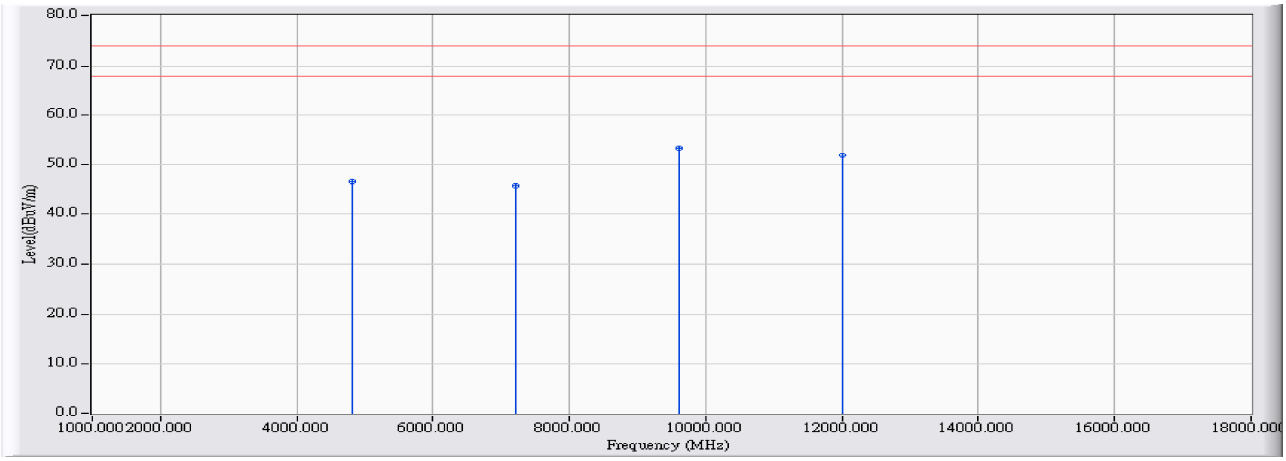
		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1	*	55.023	-26.803	61.007	34.203	-14.797	49.000	QUASIPEAK
2		153.469	-22.487	54.572	32.085	-21.415	53.500	QUASIPEAK
3		323.105	-18.942	56.629	37.687	-18.713	56.400	QUASIPEAK
4		496.232	-14.477	52.778	38.301	-18.099	56.400	QUASIPEAK
5		936.665	-7.911	41.536	33.625	-22.775	56.400	QUASIPEAK
6		998.545	-7.445	42.538	35.092	-24.408	59.500	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 : 2017/08/04**
Limit : FCC_SpartC_15.209_03M_PK	**Margin : 6**
Probe : CB4_FCC_EFS_B091_1-18GHz_3M_0117 - HORIZONTAL	**Power : AC 120V/60Hz**
EUT : UHD751-P	**Note : Mode 1: Tx_802.15.1_2402MHz**

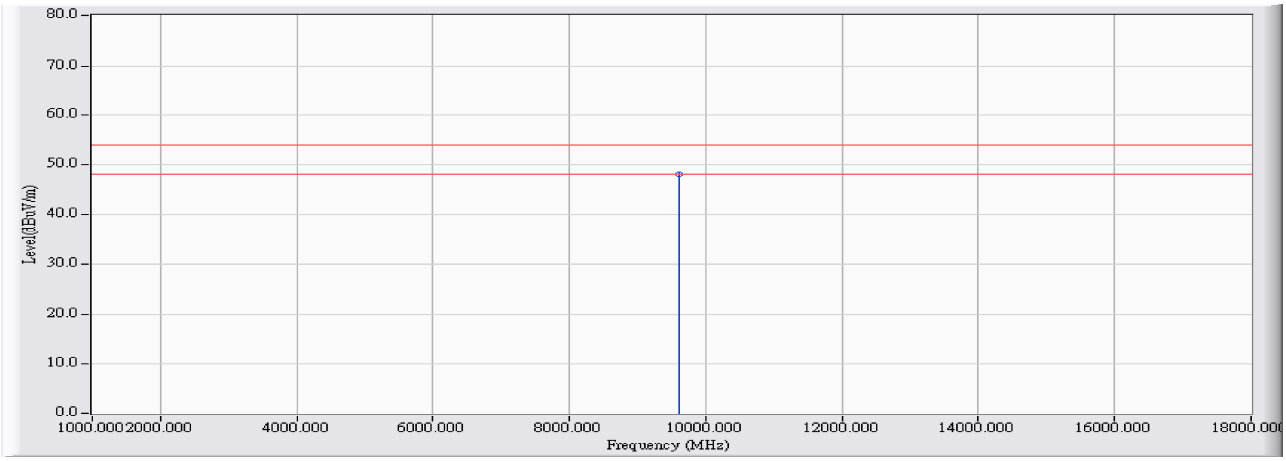


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1		4804.000	-0.209	46.650	46.442	-27.558	74.000	PEAK
2		7206.000	6.970	38.810	45.779	-28.221	74.000	PEAK
3	*	9608.000	12.540	40.950	53.491	-20.509	74.000	PEAK
4		12010.000	15.516	36.360	51.876	-22.124	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 18GHz were not included is because their levels are too low.

Site : CB4-H	**Time : 2017/08/04**
Limit : FCC_SpartC_15.209_03M_AV	**Margin : 6**
Probe : CB4_FCC_EFS_B091_1-18GHz_3M_0117 - HORIZONTAL	**Power : AC 120V/60Hz**
EUT : UHD751-P	**Note : Mode 1: Tx_802.15.1_2402MHz**

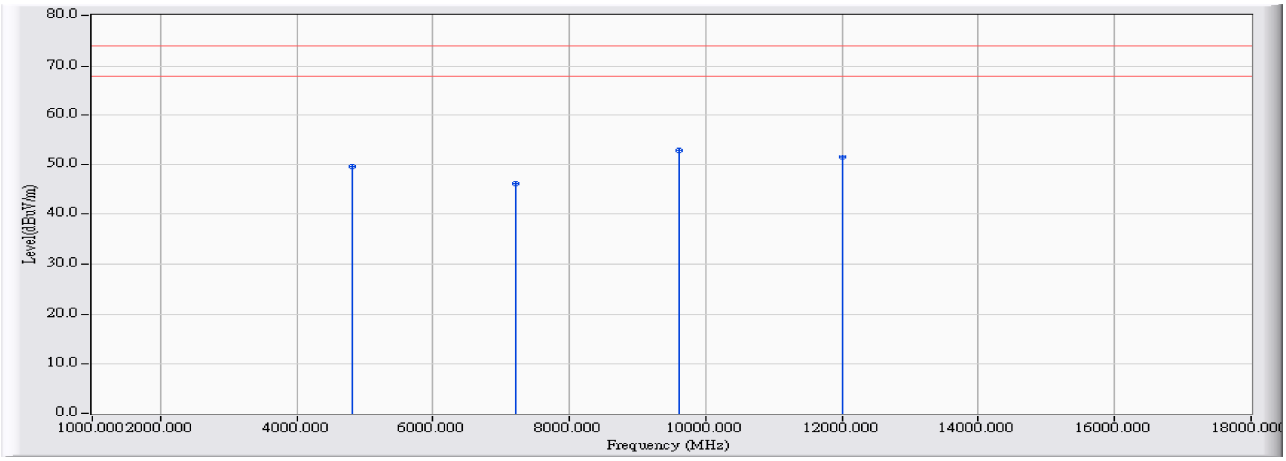


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1	*	9608.000	12.540	35.510	48.051	-5.949	54.000	AVERAGE

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.
7. The Emission above 18GHz were not included is because their levels are too low.

Site : CB4-H	**Time : 2017/08/04**
Limit : FCC_SpartC_15.209_03M_PK	**Margin : 6**
Probe : CB4_FCC_EFS_B091_1-18GHz_3M_0117 - VERTICAL	**Power : AC 120V/60Hz**
EUT : UHD751-P	**Note : Mode 1: Tx_802.15.1_2402MHz**

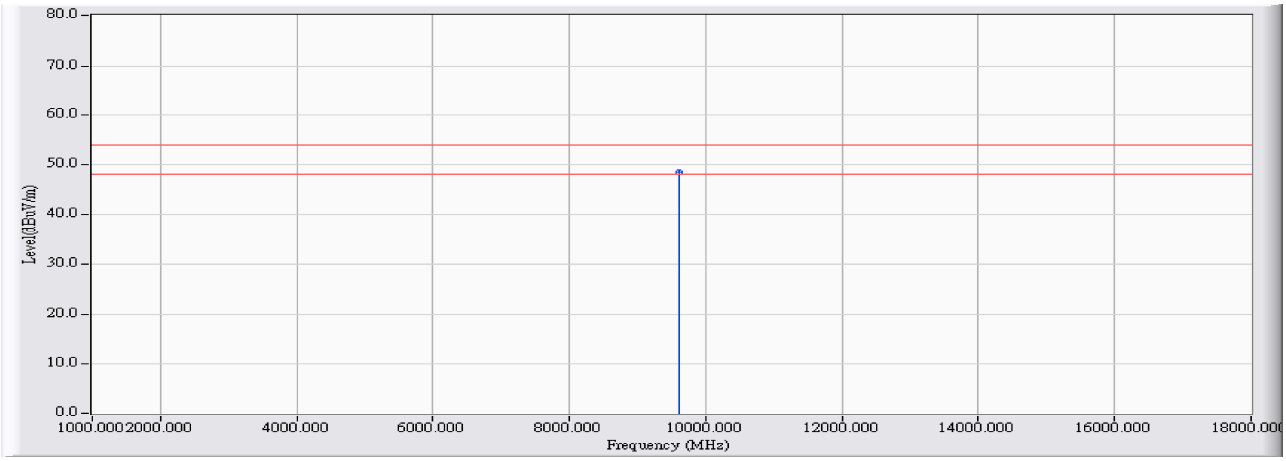


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1		4804.000	-0.209	49.680	49.472	-24.528	74.000	PEAK
2		7206.000	6.970	39.060	46.029	-27.971	74.000	PEAK
3	*	9608.000	12.540	40.380	52.921	-21.079	74.000	PEAK
4		12010.000	15.516	35.990	51.506	-22.494	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 18GHz were not included is because their levels are too low.

Site : CB4-H	**Time : 2017/08/04**
Limit : FCC_SpartC_15.209_03M_AV	**Margin : 6**
Probe : CB4_FCC_EFS_B091_1-18GHz_3M_0117 - VERTICAL	**Power : AC 120V/60Hz**
EUT : UHD751-P	**Note : Mode 1: Tx_802.15.1_2402MHz**

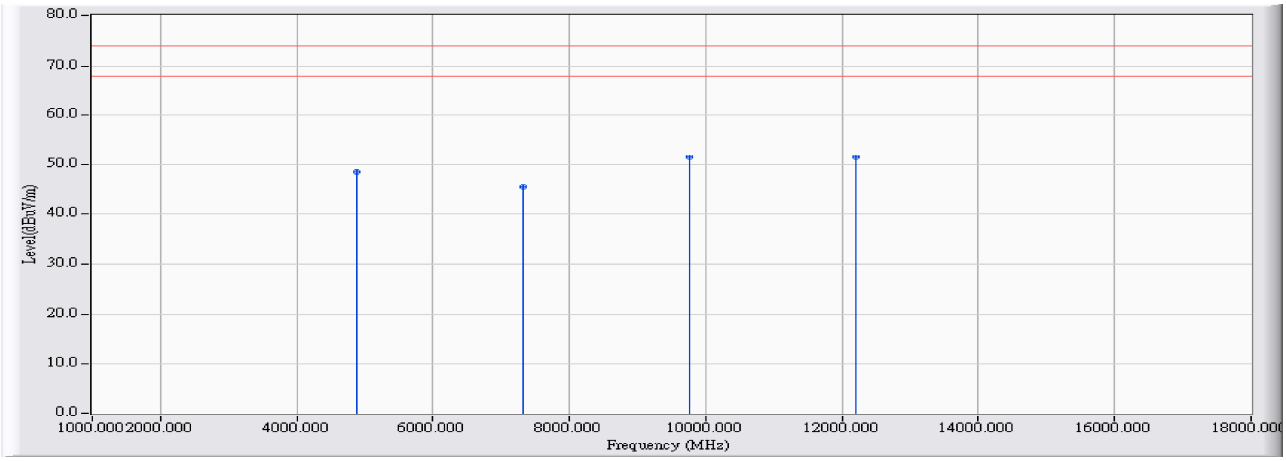


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1	*	9608.000	12.540	35.840	48.381	-5.619	54.000	AVERAGE

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.
7. The Emission above 18GHz were not included is because their levels are too low.

Site : CB4-H	**Time : 2017/08/04**
Limit : FCC_SpartC_15.209_03M_PK	**Margin : 6**
Probe : CB4_FCC_EFS_B091_1-18GHz_3M_0117 - HORIZONTAL	**Power : AC 120V/60Hz**
EUT : UHD751-P	**Note : Mode 1: Tx_802.15.1_2440MHz**

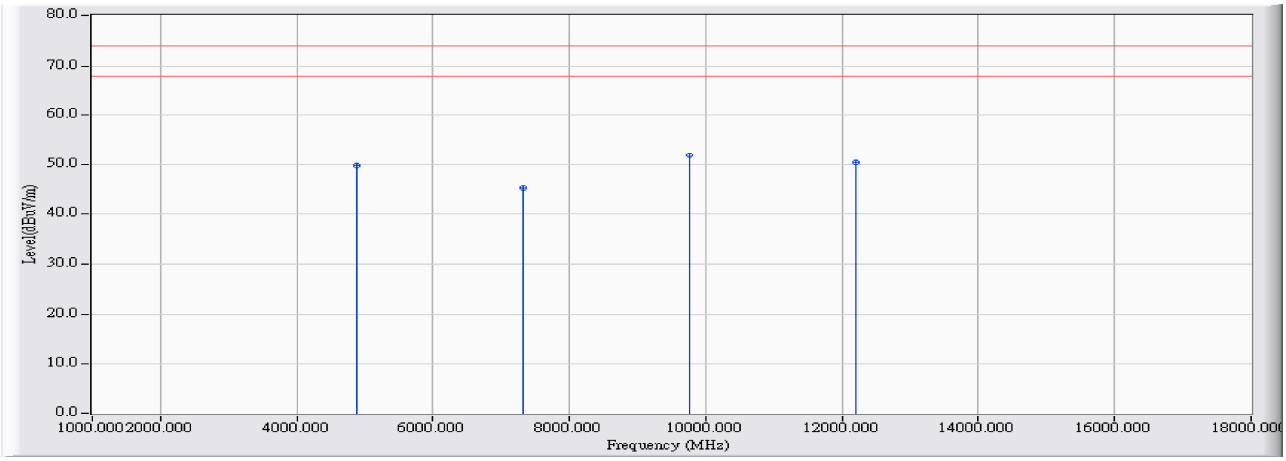


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1		4880.000	-0.126	48.580	48.454	-25.546	74.000	PEAK
2		7320.000	7.437	38.120	45.557	-28.443	74.000	PEAK
3	*	9760.000	12.866	38.700	51.565	-22.435	74.000	PEAK
4		12200.000	14.851	36.690	51.542	-22.458	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 18GHz were not included is because their levels are too low.

Site : CB4-H	**Time : 2017/08/04**
Limit : FCC_SpartC_15.209_03M_PK	**Margin : 6**
Probe : CB4_FCC_EFS_B091_1-18GHz_3M_0117 - VERTICAL	**Power : AC 120V/60Hz**
EUT : UHD751-P	**Note : Mode 1: Tx_802.15.1_2440MHz**

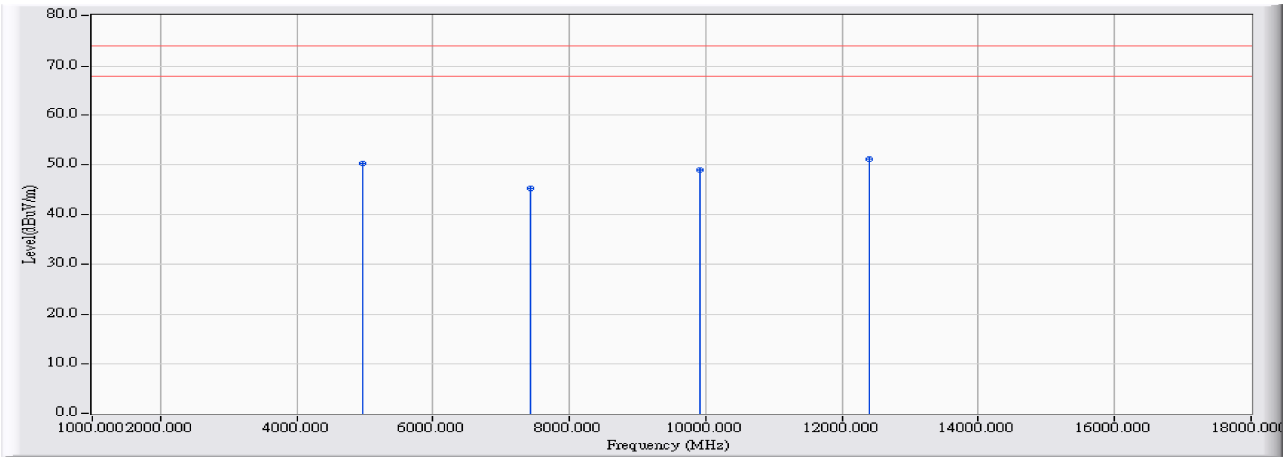


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1		4880.000	-0.126	49.800	49.674	-24.326	74.000	PEAK
2		7320.000	7.437	37.880	45.317	-28.683	74.000	PEAK
3	*	9760.000	12.866	38.940	51.805	-22.195	74.000	PEAK
4		12200.000	14.851	35.570	50.422	-23.578	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 18GHz were not included is because their levels are too low.

Site : CB4-H	**Time : 2017/08/04**
Limit : FCC_SpartC_15.209_03M_PK	**Margin : 6**
Probe : CB4_FCC_EFS_B091_1-18GHz_3M_0117 - HORIZONTAL	**Power : AC 120V/60Hz**
EUT : UHD751-P	**Note : Mode 1: Tx_802.15.1_2480MHz**

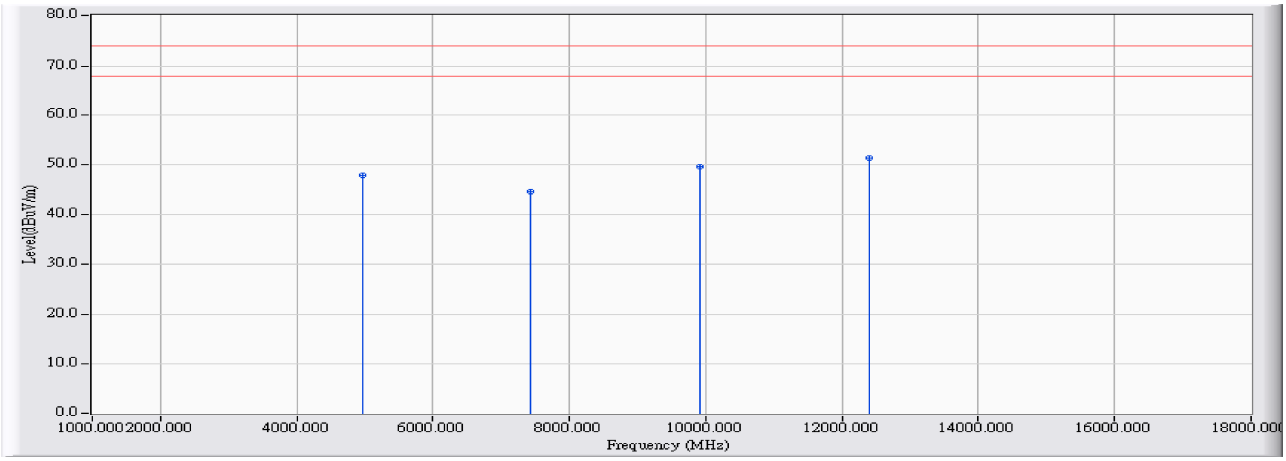


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1		4960.000	-0.034	50.180	50.146	-23.854	74.000	PEAK
2		7440.000	7.868	37.300	45.168	-28.832	74.000	PEAK
3		9920.000	13.091	35.730	48.821	-25.179	74.000	PEAK
4	*	12400.000	15.733	35.260	50.993	-23.007	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 18GHz were not included is because their levels are too low.

Site : CB4-H	**Time : 2017/08/04**
Limit : FCC_SpartC_15.209_03M_PK	**Margin : 6**
Probe : CB4_FCC_EFS_B091_1-18GHz_3M_0117 - VERTICAL	**Power : AC 120V/60Hz**
EUT : UHD751-P	**Note : Mode 1: Tx_802.15.1_2480MHz**



		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1		4960.000	-0.034	47.840	47.806	-26.194	74.000	PEAK
2		7440.000	7.868	36.710	44.578	-29.422	74.000	PEAK
3		9920.000	13.091	36.470	49.561	-24.439	74.000	PEAK
4	*	12400.000	15.733	35.520	51.253	-22.747	74.000	PEAK

Note:

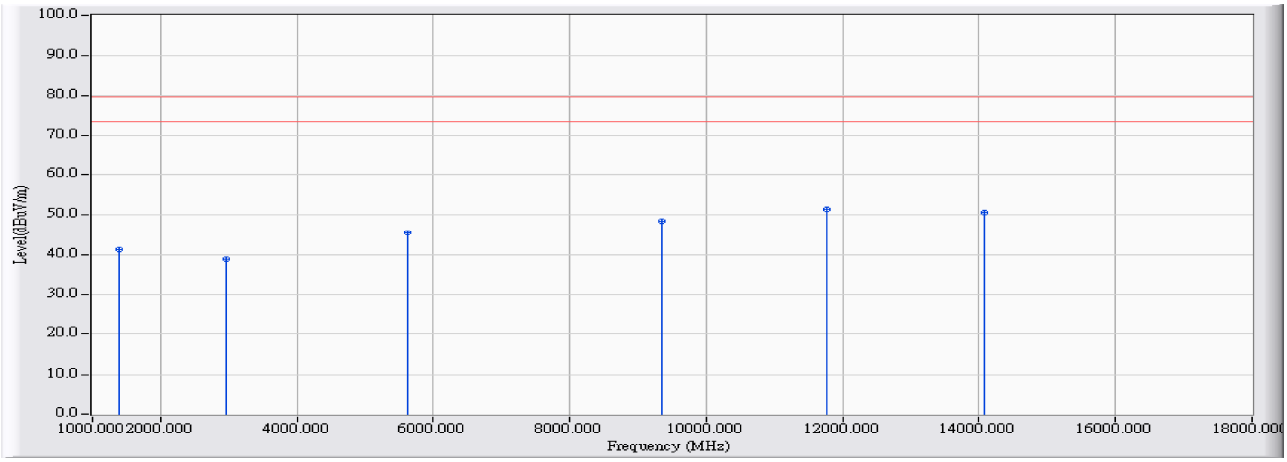
1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. “ * ”, means this data is the worst emission level.
5. Measurement Level = Reading 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 18GHz 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 5 GHz WiFi mode and repeated with the 2.4 GHz BT 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 : 2017/08/07**
Limit : FCC_A_(Above_1G)_3M_PK	**Margin : 6**
Probe : CB4_FCC_EFS_B091_1-18GHz_3M_0117 - HORIZONTAL	**Power : AC 120V/60Hz**
EUT : UHD751-P	**Note : 2.4G+BT_co-location mode**

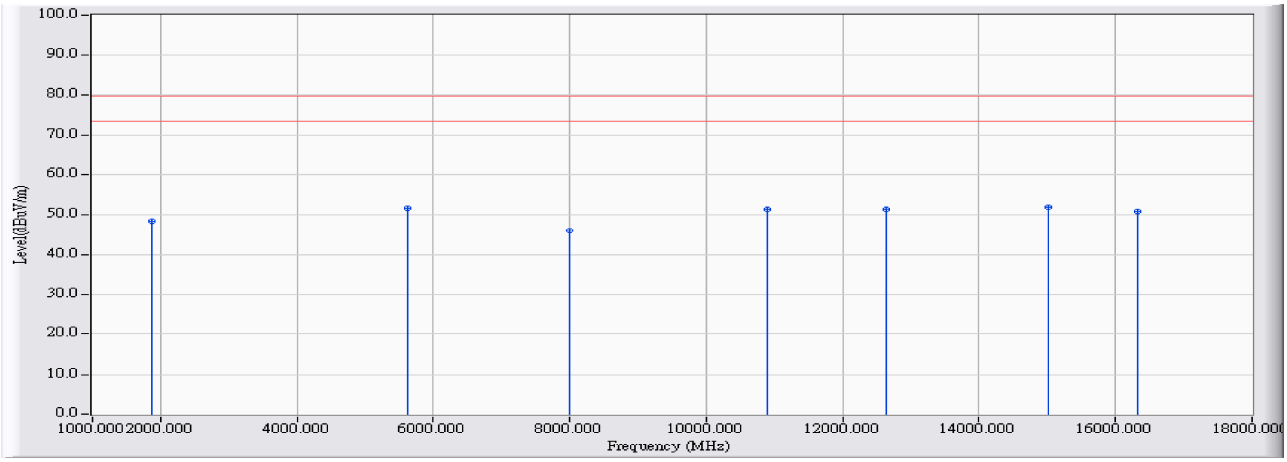


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1		1397.760	-13.243	54.487	41.243	-38.257	79.500	PEAK
2		2970.103	-7.209	46.011	38.802	-40.698	79.500	PEAK
3		5615.038	0.683	44.780	45.464	-34.036	79.500	PEAK
4		9358.064	12.252	36.260	48.513	-30.987	79.500	PEAK
5	*	11775.222	16.741	34.675	51.415	-28.085	79.500	PEAK
6		14076.792	18.593	32.037	50.630	-28.870	79.500	PEAK

Note:

1. All Readings below 1GHz are Quasi-Peak, 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. “ # ”, means the frequency is out of the restricted band.
6. Measurement Level = Reading Level + Correct Factor.
7. The average measurement was not performed when the peak measured data under the limit of average detection.

Site : CB4-H	**Time : 2017/08/07**
Limit : FCC_A_(Above_1G)_3M_PK	**Margin : 6**
Probe : CB4_FCC_EFS_B091_1-18GHz_3M_0117 - VERTICAL	**Power : AC 120V/60Hz**
EUT : UHD751-P	**Note : 2.4G+BT_co-location mode**

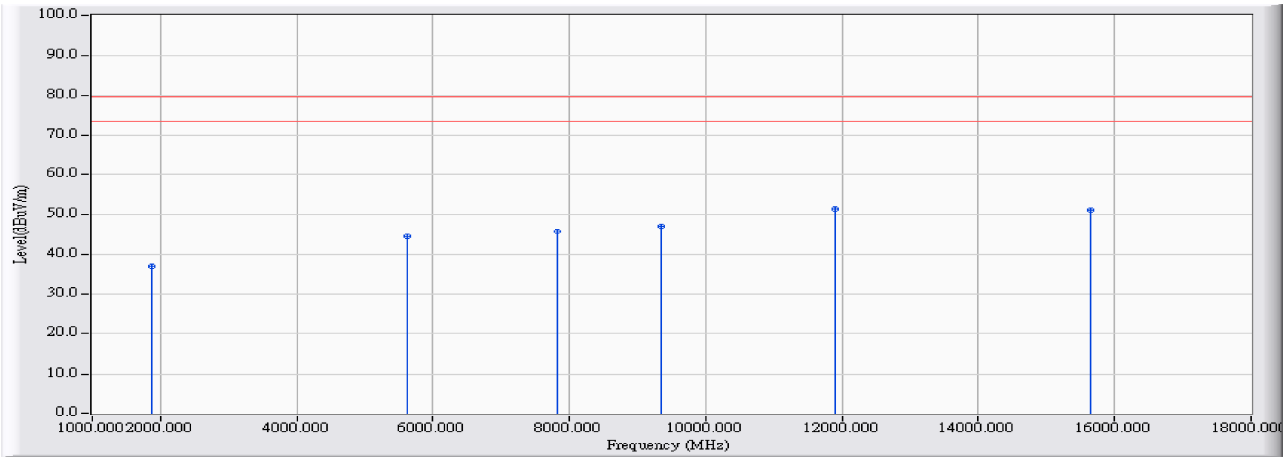


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1		1870.313	-11.561	60.033	48.471	-31.029	79.500	PEAK
2		5615.038	0.683	51.122	51.806	-27.694	79.500	PEAK
3		7996.500	9.530	36.710	46.240	-33.260	79.500	PEAK
4		10898.110	15.646	35.885	51.532	-27.968	79.500	PEAK
5		12640.435	16.450	34.953	51.403	-28.097	79.500	PEAK
6	*	15023.597	16.918	34.982	51.900	-27.600	79.500	PEAK
7		16327.366	13.695	37.171	50.866	-28.634	79.500	PEAK

Note:

1. All Readings below 1GHz are Quasi-Peak, 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. “ # ”, means the frequency is out of the restricted band.
6. Measurement Level = Reading Level + Correct Factor.
7. The average measurement was not performed when the peak measured data under the limit of average detection.

Site : CB4-H	**Time : 2017/08/07**
Limit : FCC_A_(Above_1G)_3M_PK	**Margin : 6**
Probe : CB4_FCC_EFS_B091_1-18GHz_3M_0117 - HORIZONTAL	**Power : AC 120V/60Hz**
EUT : UHH751-P	**Note : 5G+BT_co-location mode**

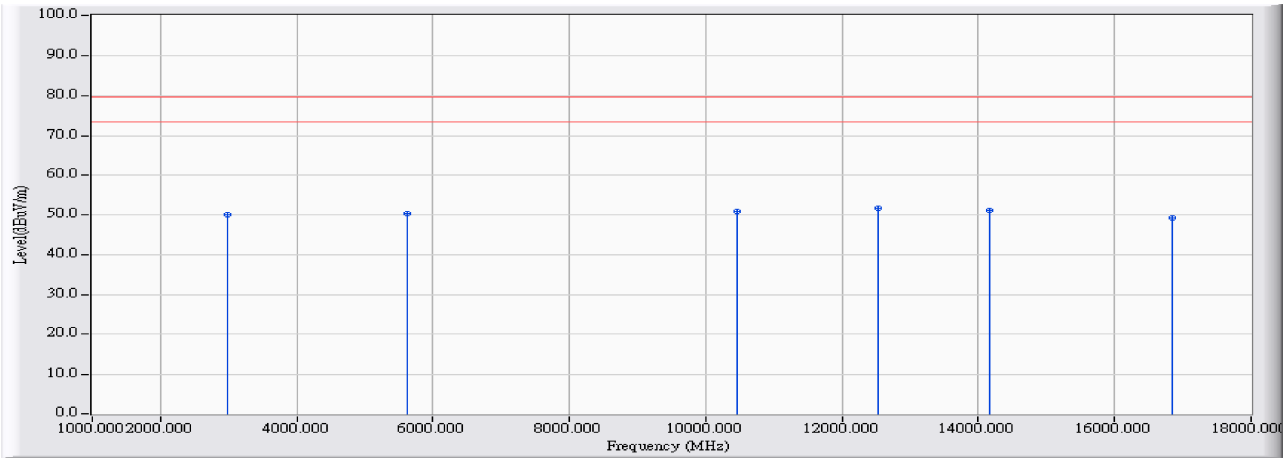


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1		1870.313	-11.561	48.610	37.048	-42.452	79.500	PEAK
2		5615.038	0.683	43.950	44.634	-34.866	79.500	PEAK
3		7819.718	9.069	36.844	45.912	-33.588	79.500	PEAK
4		9358.064	12.252	35.051	47.304	-32.196	79.500	PEAK
5	*	11907.809	16.055	35.424	51.479	-28.021	79.500	PEAK
6		15638.935	14.443	36.896	51.340	-28.160	79.500	PEAK

Note:

1. All Readings below 1GHz are Quasi-Peak, 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. “ # ”, means the frequency is out of the restricted band.
6. Measurement Level = Reading Level + Correct Factor.
7. The average measurement was not performed when the peak measured data under the limit of average detection.

Site : CB4-H	**Time : 2017/08/07**
Limit : FCC_A_(Above_1G)_3M_PK	**Margin : 6**
Probe : CB4_FCC_EFS_B091_1-18GHz_3M_0117 - VERTICAL	**Power : AC 120V/60Hz**
EUT : UHH751-P	**Note : 5G+BT_co-location mode**



		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1		2975.202	-7.194	57.218	50.024	-29.476	79.500	PEAK
2		5615.038	0.683	49.689	50.373	-29.127	79.500	PEAK
3		10454.454	14.635	36.319	50.954	-28.546	79.500	PEAK
4	*	12538.445	16.456	35.416	51.872	-27.628	79.500	PEAK
5		14166.883	18.576	32.622	51.198	-28.302	79.500	PEAK
6		16850.914	14.911	34.325	49.235	-30.265	79.500	PEAK

Note:

1. All Readings below 1GHz are Quasi-Peak, 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. “ # ”, means the frequency is out of the restricted band.
6. Measurement Level = Reading Level + Correct Factor.
7. The average measurement was not performed when the peak measured data under the limit of average detection.

5. RF antenna conducted test

5.1. Test Equipment

The following test equipment is used during the test:

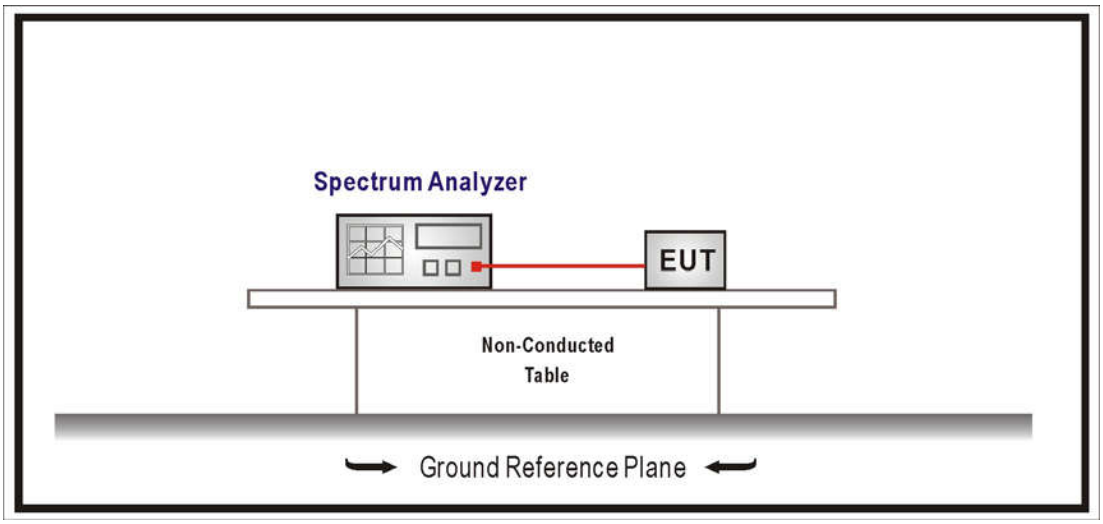
RF antenna conducted test / SR10-H

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

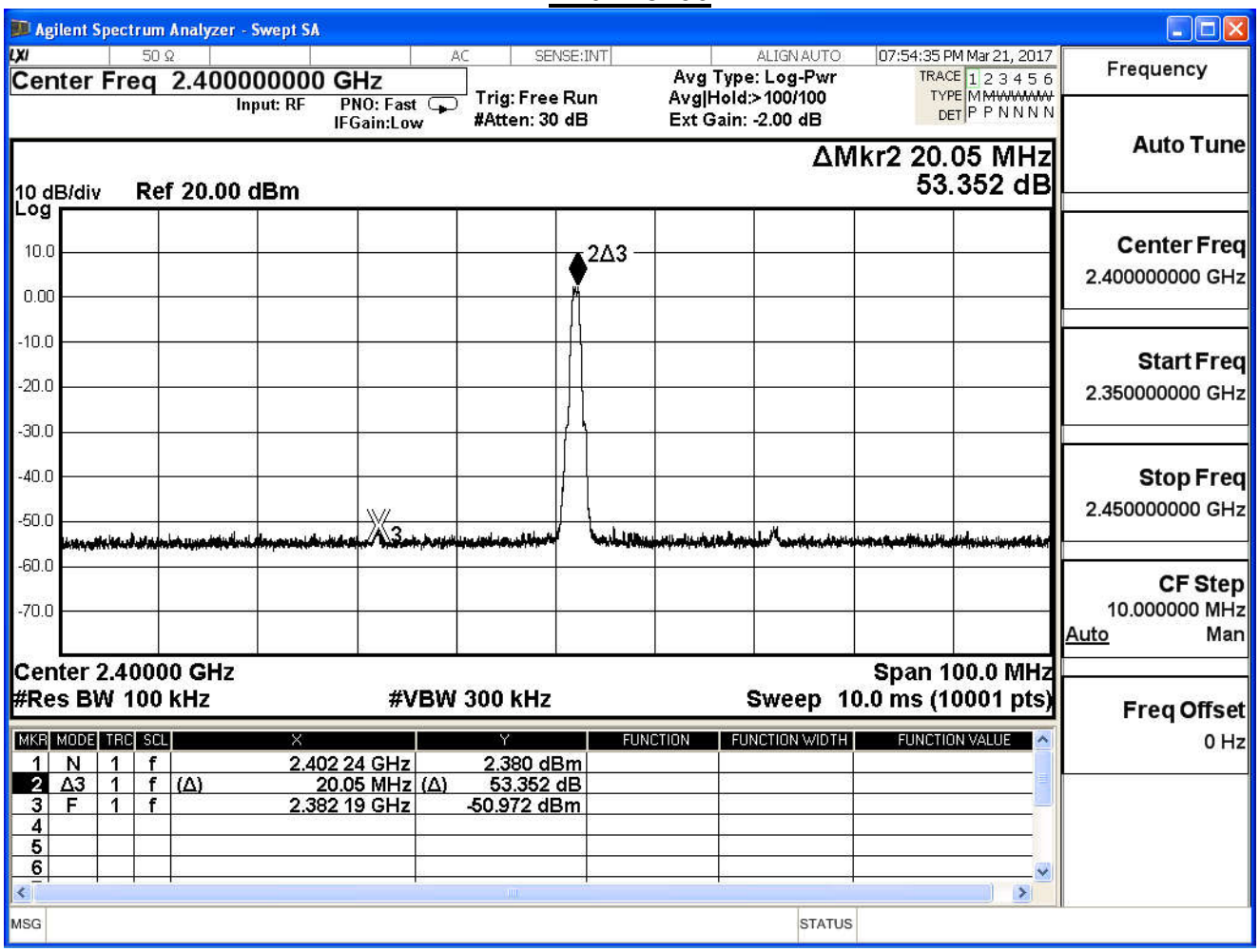
5.6. Test Result

Product	UHD751-P		
Test Item	RF antenna conducted test		
Test Mode	Mode 1: Tx		
Date of Test	2017/03/21	Test Site	SR10-H

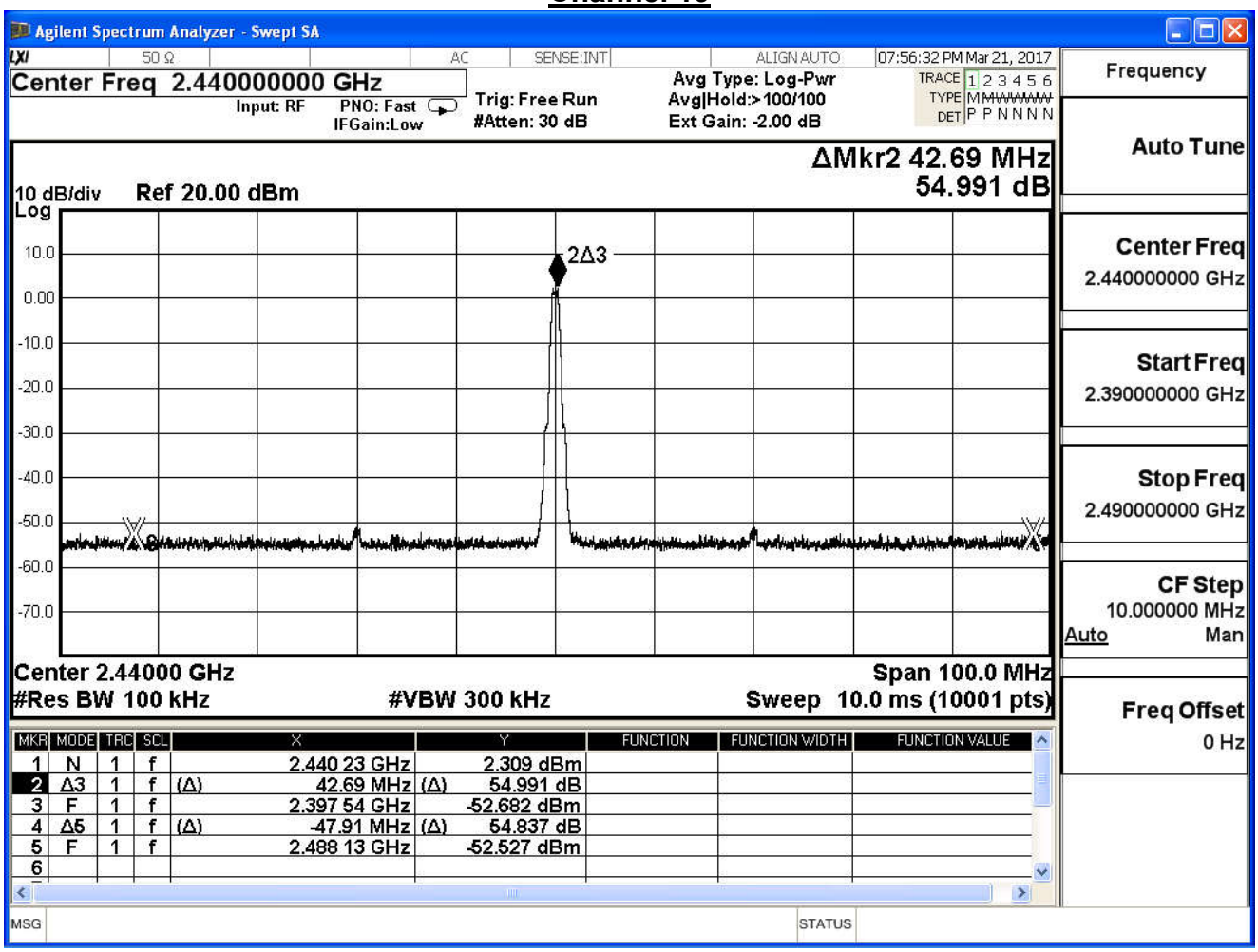
GFSK

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

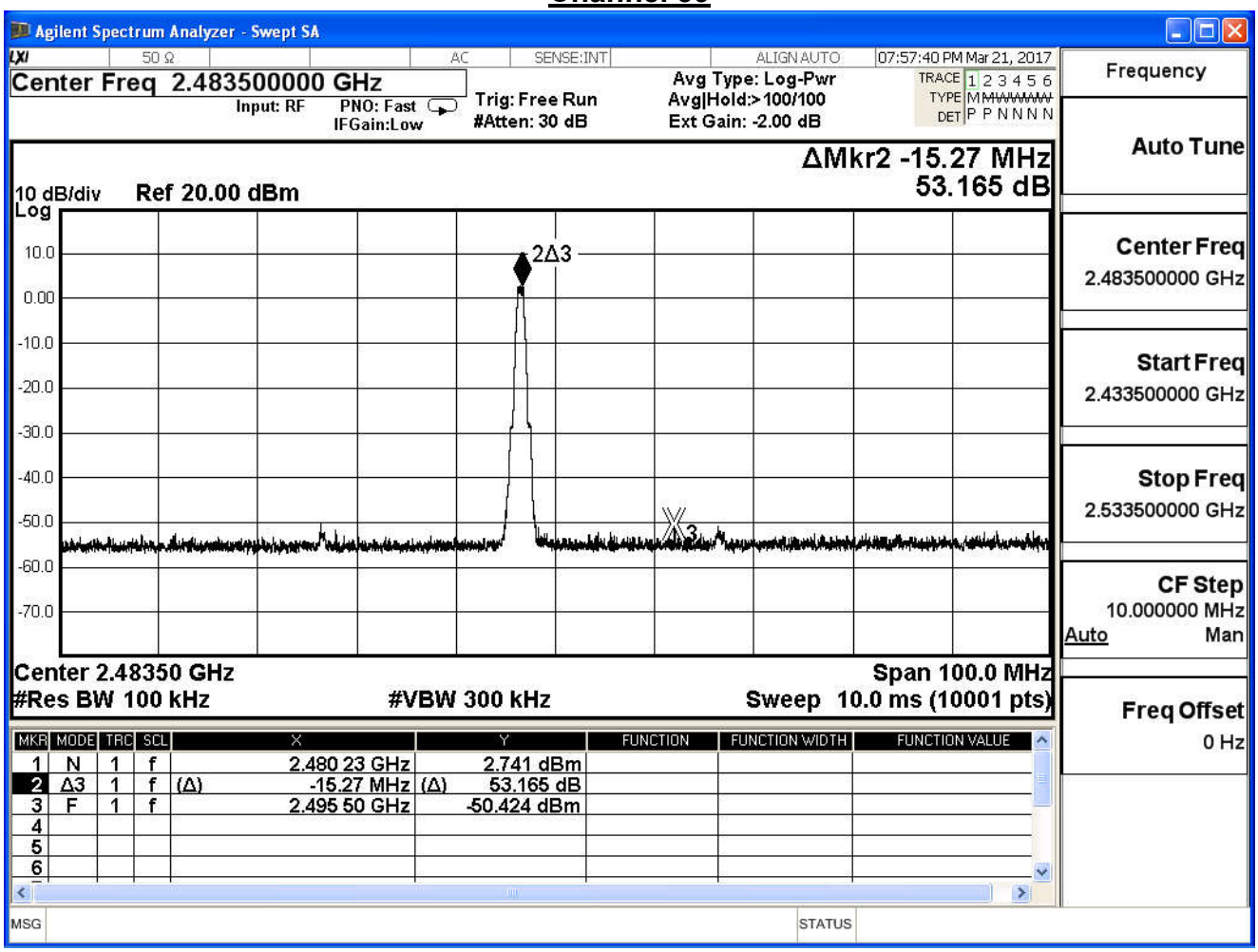
Channel 00



Channel 19

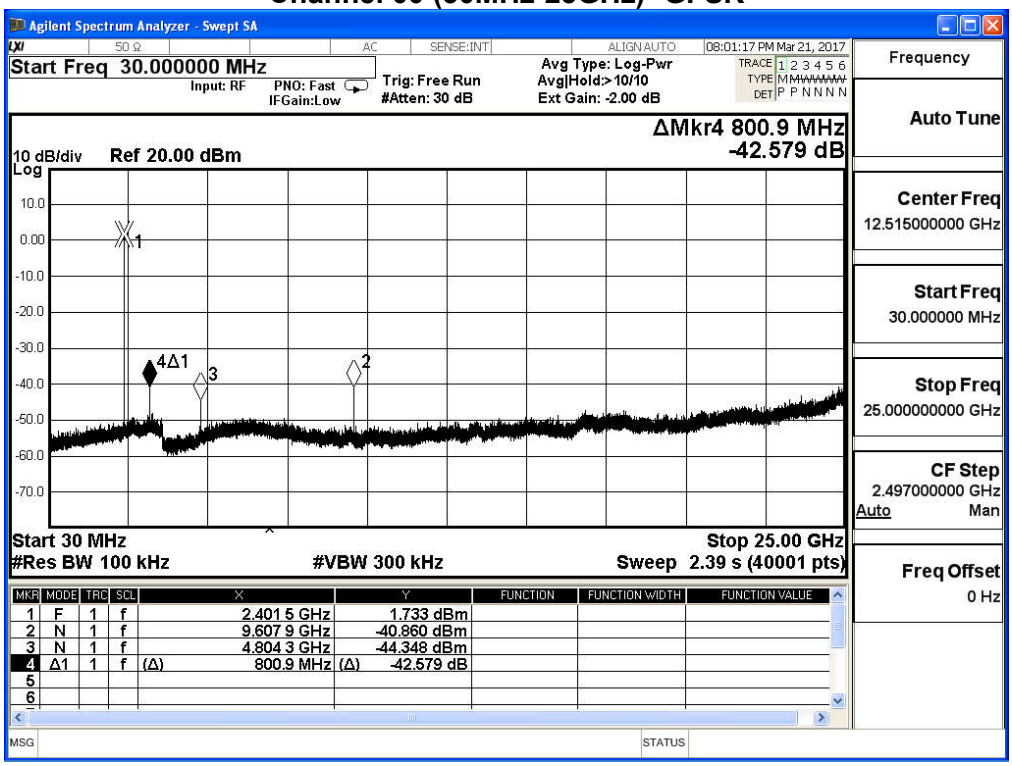

Agilent Spectrum Analyzer - Swept SA
50 Ω
AC
SENSE:INT
ALIGN AUTO
07:56:32 PM Mar 21, 2017
Center Freq 2.440000000 GHz
Input: RF
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 30 dB
Avg Type: Log-Pwr
Avg|Hold:>100/100
Ext Gain: -2.00 dB
TRACE 1 2 3 4 5 6
TYPE M WWWWW
DET P P N N N
ΔMkr2 42.69 MHz
54.991 dB
10 dB/div
Log
Ref 20.00 dBm
10.0
0.00
-10.0
-20.0
-30.0
-40.0
-50.0
-60.0
-70.0
2Δ3
Center 2.44000 GHz
#Res BW 100 kHz
#VBW 300 kHz
Span 100.0 MHz
Sweep 10.0 ms (10001 pts)
MKR MODE TRC SCL X Y FUNCTION FUNCTION WIDTH FUNCTION VALUE
1 N 1 f 2.440 23 GHz 2.309 dBm
2 Δ3 1 f (Δ) 42.69 MHz (Δ) 54.991 dB
3 F 1 f 2.397 54 GHz -52.682 dBm
4 Δ5 1 f (Δ) -47.91 MHz (Δ) 54.837 dB
5 F 1 f 2.488 13 GHz -52.527 dBm
6
MSG
STATUS
Frequency
Auto Tune
Center Freq
2.440000000 GHz
Start Freq
2.390000000 GHz
Stop Freq
2.490000000 GHz
CF Step
10.000000 MHz
Auto
Man
Freq Offset
0 Hz

Channel 39

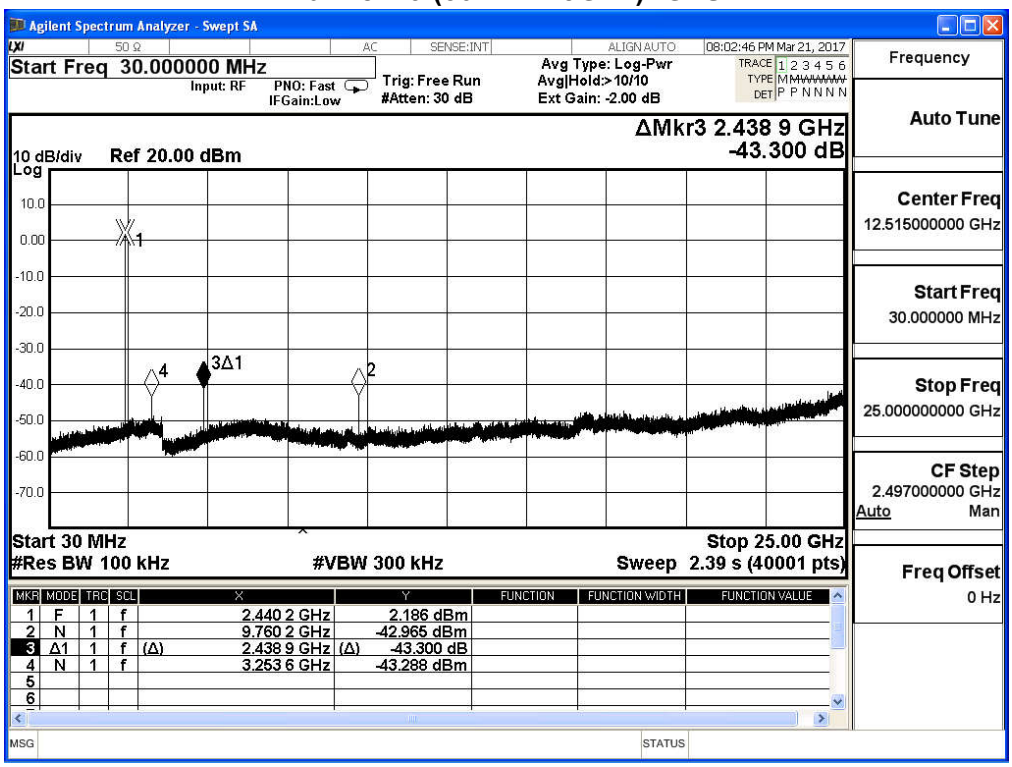

Agilent Spectrum Analyzer - Swept SA
50 Ω
AC
SENSE:INT
ALIGN AUTO
07:57:40 PM Mar 21, 2017
Center Freq 2.483500000 GHz
Input: RF
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 30 dB
Avg Type: Log-Pwr
Avg|Hold:>100/100
Ext Gain: -2.00 dB
TRACE 1 2 3 4 5 6
TYPE M
DET P P N N N
ΔMkr2 -15.27 MHz
53.165 dB
10 dB/div
Log
Ref 20.00 dBm
10.0
0.00
-10.0
-20.0
-30.0
-40.0
-50.0
-60.0
-70.0
2Δ3
Center 2.48350 GHz
#Res BW 100 kHz
#VBW 300 kHz
Span 100.0 MHz
Sweep 10.0 ms (10001 pts)
MKR MODE TRC SCL X Y FUNCTION FUNCTION WIDTH FUNCTION VALUE
1 N 1 f 2.480 23 GHz 2.741 dBm
2 Δ3 1 f (Δ) -15.27 MHz (Δ) 53.165 dB
3 F 1 f 2.495 50 GHz -50.424 dBm
4
5
6
MSG
STATUS
Frequency
Auto Tune
Center Freq
2.483500000 GHz
Start Freq
2.433500000 GHz
Stop Freq
2.533500000 GHz
CF Step
10.000000 MHz
Auto
Man
Freq Offset
0 Hz

Product	UHD751-P		
Test Item	RF antenna conducted test		
Test Mode	Mode 1: Tx		
Date of Test	2017/03/21	Test Site	SR10-H

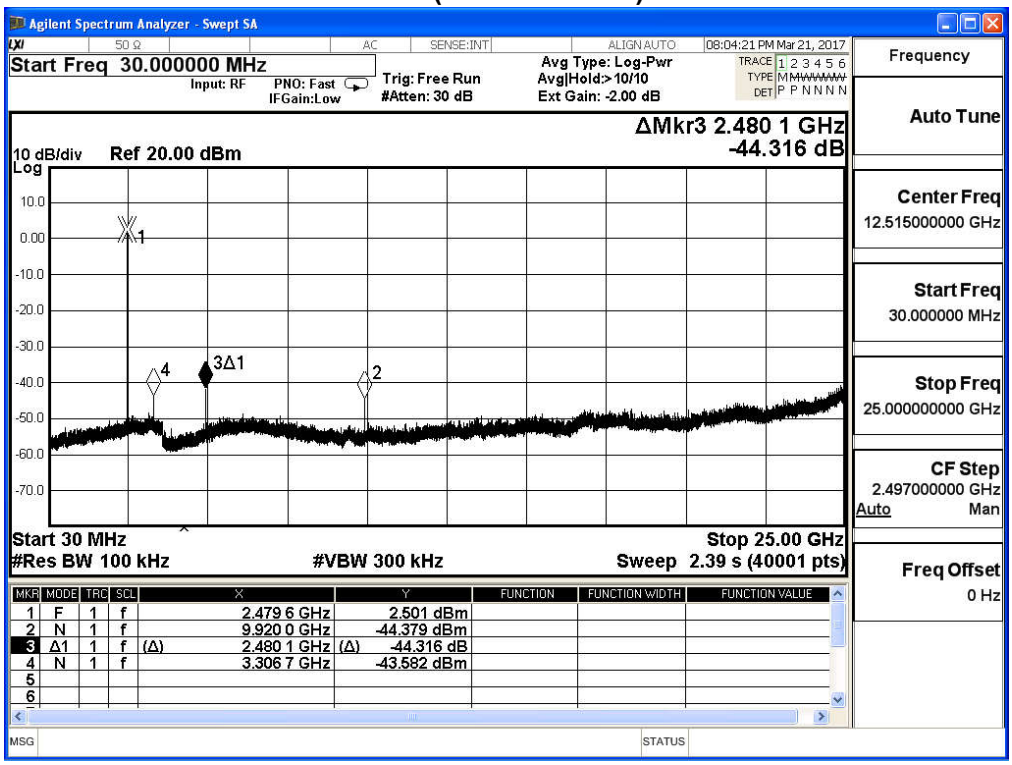
Channel 00 (30MHz-25GHz)- GFSK



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:

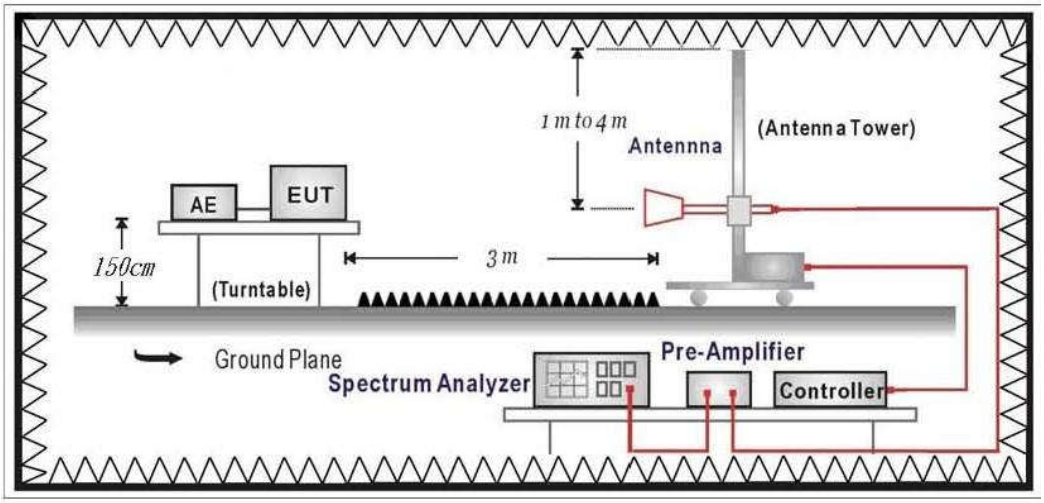
Band Edge / CB4-H

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

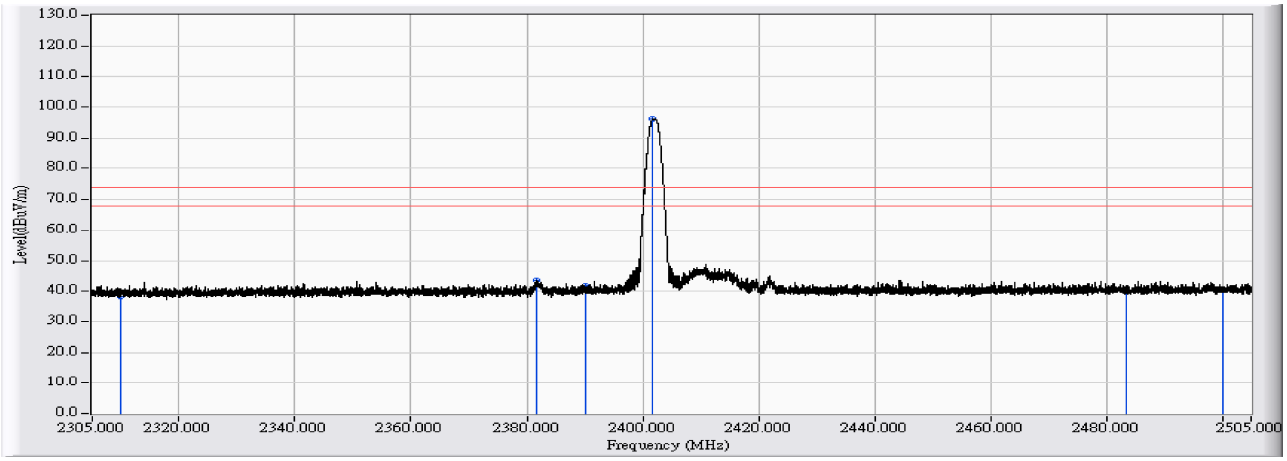
The EUT was setup according to ANSI C63.10: 2013 and tested according to DTS test procedure of KDB558074 D01 V04 for compliance to FCC 47CFR 15.247 requirements.
The EUT and its simulators are placed on a turn table which is 0.8 meter above ground.
The turn table can rotate 360 degrees to determine the 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 : 2017/08/04**
Limit : FCC_SpartC_15.209_03M_PK	**Margin : 6**
Probe : CB4_FCC_EFS_B091_1-18GHz_3M_0117 - HORIZONTAL	**Power : AC 120V/60Hz**
EUT : UHD751-P	**Note : Mode 1: Tx_802.15.1_2402MHz**

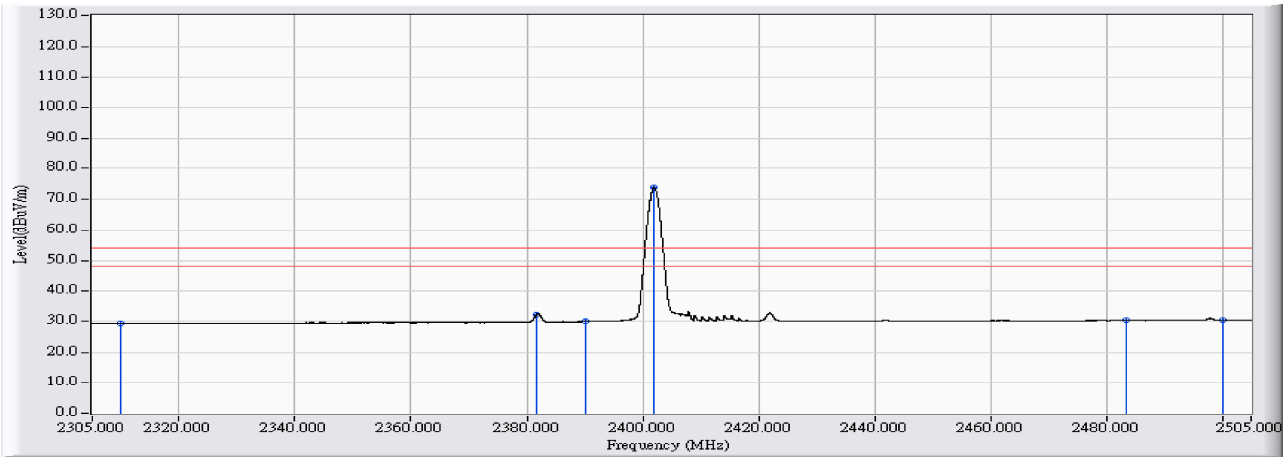


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1		2310.000	11.014	27.460	38.475	-35.525	74.000	PEAK
2		2381.752	11.488	31.952	43.441	-30.559	74.000	PEAK
3		2390.000	11.544	30.220	41.764	-32.236	74.000	PEAK
4	*	2401.730	11.622	84.476	96.098	22.098	74.000	PEAK
5		2483.500	12.172	27.447	39.619	-34.381	74.000	PEAK
6		2500.000	12.274	28.146	40.421	-33.579	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 : 2017/08/04**
Limit : FCC_SpartC_15.209_03M_AV	**Margin : 6**
Probe : CB4_FCC_EFS_B091_1-18GHz_3M_0117 - HORIZONTAL	**Power : AC 120V/60Hz**
EUT : UHD751-P	**Note : Mode 1: Tx_802.15.1_2402MHz**

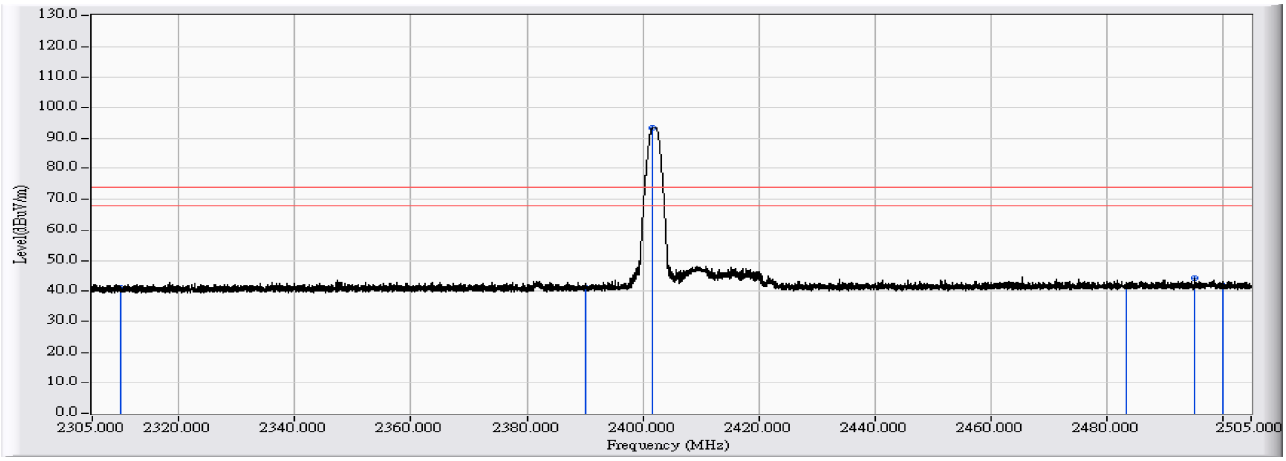


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1		2310.000	11.014	18.190	29.205	-24.795	54.000	AVERAGE
2		2381.772	11.488	20.742	32.231	-21.769	54.000	AVERAGE
3		2390.000	11.544	18.405	29.949	-24.051	54.000	AVERAGE
4	*	2401.930	11.623	62.154	73.778	19.778	54.000	AVERAGE
5		2483.500	12.172	18.069	30.241	-23.759	54.000	AVERAGE
6		2500.000	12.274	18.021	30.296	-23.704	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 : 2017/08/04**
Limit : FCC_SpartC_15.209_03M_PK	**Margin : 6**
Probe : CB4_FCC_EFS_B091_1-18GHz_3M_0117 - VERTICAL	**Power : AC 120V/60Hz**
EUT : UHD751-P	**Note : Mode 1: Tx_802.15.1_2402MHz**

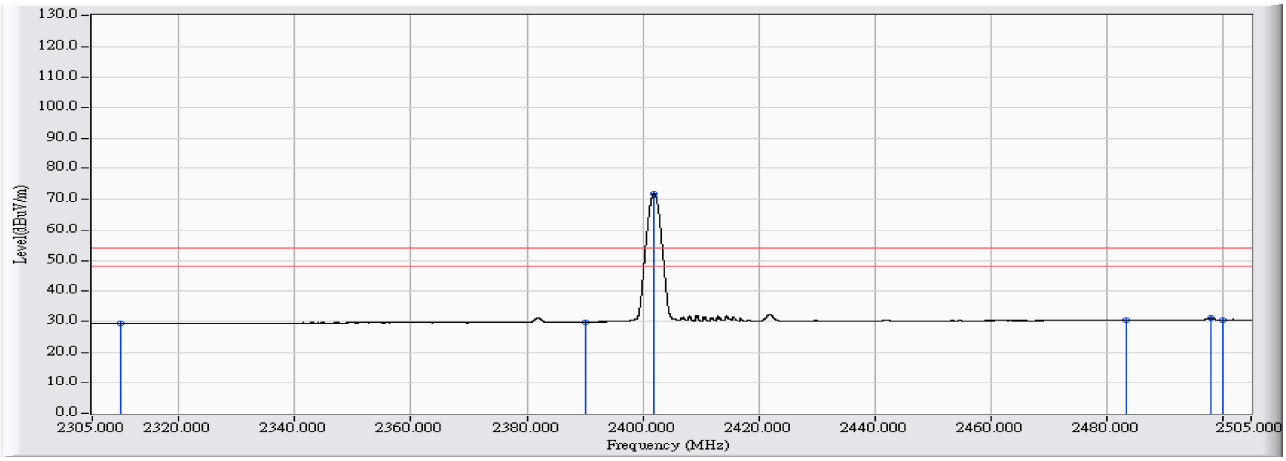


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1		2310.000	11.014	30.101	41.116	-32.884	74.000	PEAK
2		2390.000	11.544	29.617	41.161	-32.839	74.000	PEAK
3	*	2401.730	11.622	81.859	93.481	19.481	74.000	PEAK
4		2483.500	12.172	29.426	41.598	-32.402	74.000	PEAK
5		2495.241	12.250	31.933	44.183	-29.817	74.000	PEAK
6		2500.000	12.274	29.709	41.984	-32.016	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 : 2017/08/04**
Limit : FCC_SpartC_15.209_03M_AV	**Margin : 6**
Probe : CB4_FCC_EFS_B091_1-18GHz_3M_0117 - VERTICAL	**Power : AC 120V/60Hz**
EUT : UHD751-P	**Note : Mode 1: Tx_802.15.1_2402MHz**

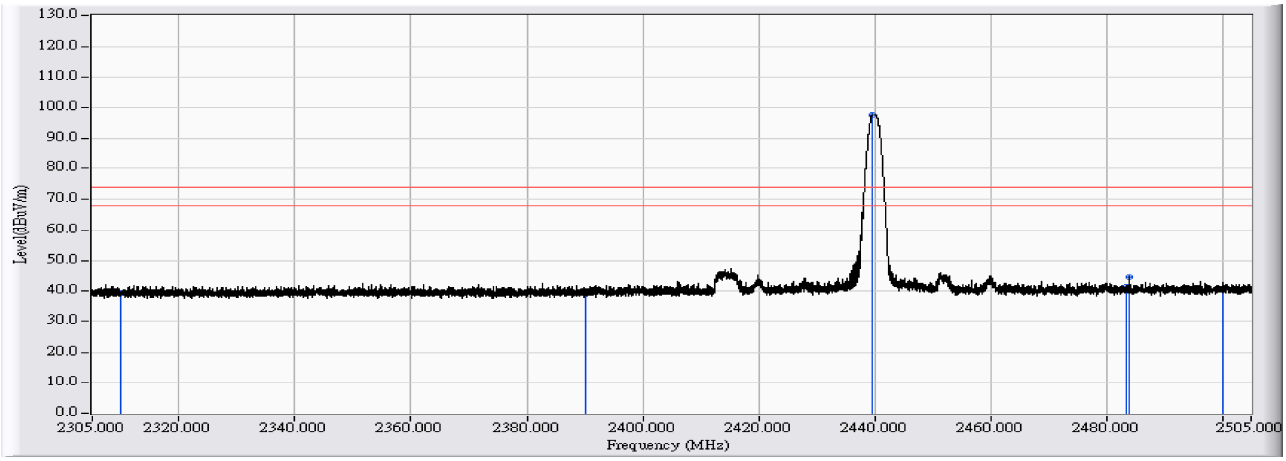


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1		2310.000	11.014	18.128	29.143	-24.857	54.000	AVERAGE
2		2390.000	11.544	18.198	29.742	-24.258	54.000	AVERAGE
3	*	2401.950	11.623	60.259	71.883	17.883	54.000	AVERAGE
4		2483.500	12.172	18.142	30.314	-23.686	54.000	AVERAGE
5		2497.961	12.265	18.649	30.914	-23.086	54.000	AVERAGE
6		2500.000	12.274	18.099	30.374	-23.626	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 : 2017/08/04**
Limit : FCC_SpartC_15.209_03M_PK	**Margin : 6**
Probe : CB4_FCC_EFS_B091_1-18GHz_3M_0117 - HORIZONTAL	**Power : AC 120V/60Hz**
EUT : UHD751-P	**Note : Mode 1: Tx_802.15.1_2440MHz**

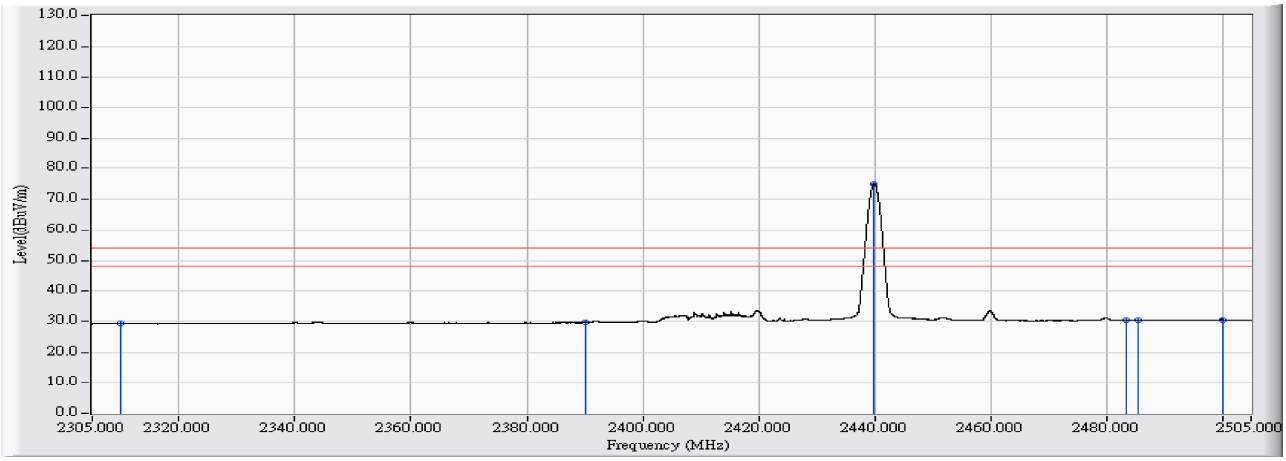


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1		2310.000	11.014	28.464	39.479	-34.521	74.000	PEAK
2		2390.000	11.544	28.170	39.714	-34.286	74.000	PEAK
3	*	2439.706	11.878	85.834	97.712	23.712	74.000	PEAK
4		2483.500	12.172	29.347	41.519	-32.481	74.000	PEAK
5		2484.102	12.176	32.292	44.468	-29.532	74.000	PEAK
6		2500.000	12.274	28.675	40.950	-33.050	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 : 2017/08/04**
Limit : FCC_SpartC_15.209_03M_AV	**Margin : 6**
Probe : CB4_FCC_EFS_B091_1-18GHz_3M_0117 - HORIZONTAL	**Power : AC 120V/60Hz**
EUT : UHD751-P	**Note : Mode 1: Tx_802.15.1_2440MHz**

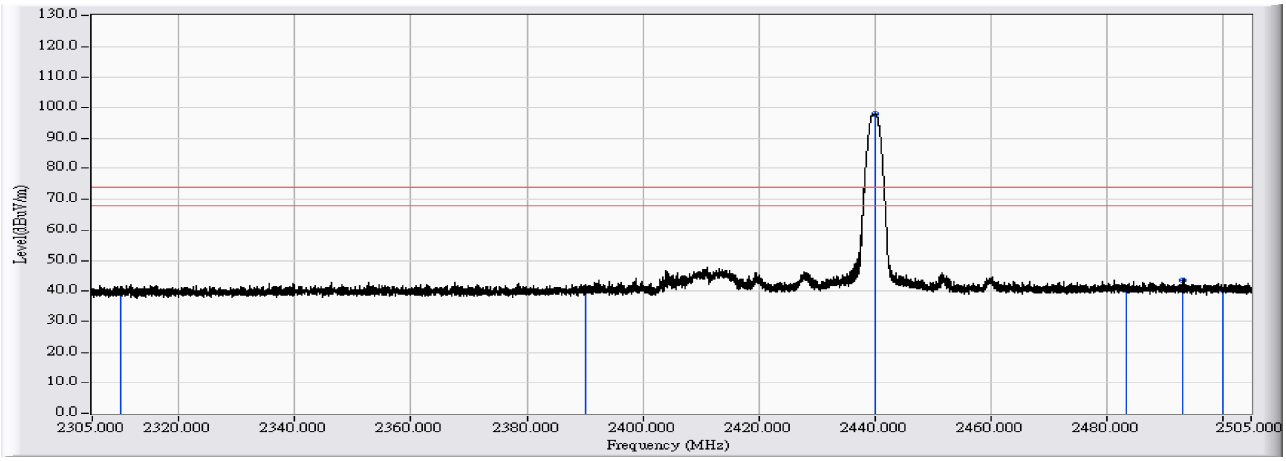


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1		2310.000	11.014	18.202	29.217	-24.783	54.000	AVERAGE
2		2390.000	11.544	17.935	29.479	-24.521	54.000	AVERAGE
3	*	2439.926	11.880	63.081	74.960	20.960	54.000	AVERAGE
4		2483.500	12.172	18.040	30.212	-23.788	54.000	AVERAGE
5		2485.402	12.185	18.019	30.204	-23.796	54.000	AVERAGE
6		2500.000	12.274	18.207	30.482	-23.518	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 : 2017/08/04**
Limit : FCC_SpartC_15.209_03M_PK	**Margin : 6**
Probe : CB4_FCC_EFS_B091_1-18GHz_3M_0117 - VERTICAL	**Power : AC 120V/60Hz**
EUT : UHD751-P	**Note : Mode 1: Tx_802.15.1_2440MHz**

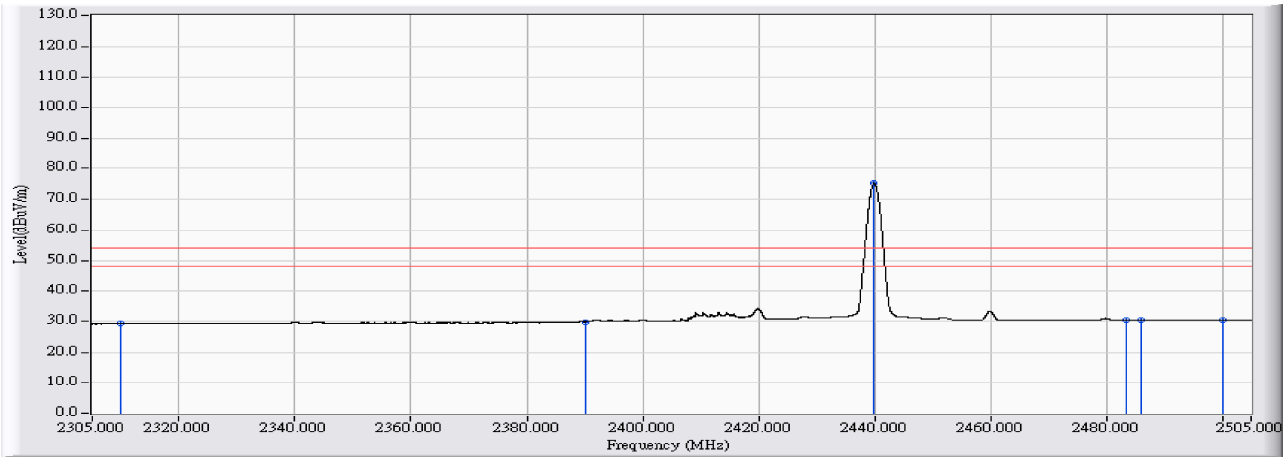


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1		2310.000	11.014	28.702	39.717	-34.283	74.000	PEAK
2		2390.000	11.544	28.856	40.400	-33.600	74.000	PEAK
3	*	2440.226	11.882	85.932	97.813	23.813	74.000	PEAK
4		2483.500	12.172	28.265	40.437	-33.563	74.000	PEAK
5		2493.241	12.237	31.434	43.671	-30.329	74.000	PEAK
6		2500.000	12.274	28.212	40.487	-33.513	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 : 2017/08/04**
Limit : FCC_SpartC_15.209_03M_AV	**Margin : 6**
Probe : CB4_FCC_EFS_B091_1-18GHz_3M_0117 - VERTICAL	**Power : AC 120V/60Hz**
EUT : UHD751-P	**Note : Mode 1: Tx_802.15.1_2440MHz**

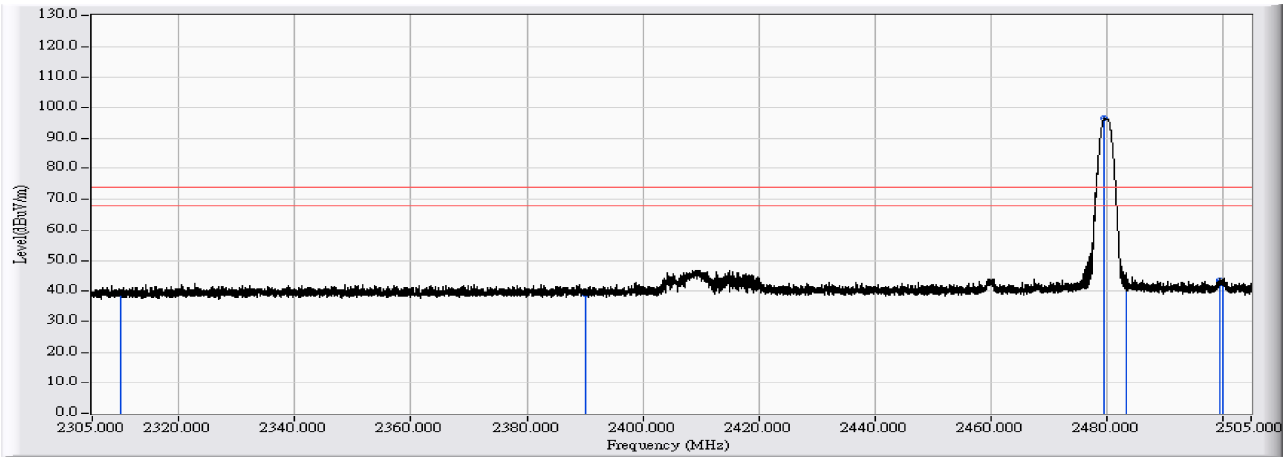


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1		2310.000	11.014	18.144	29.159	-24.841	54.000	AVERAGE
2		2390.000	11.544	18.245	29.789	-24.211	54.000	AVERAGE
3	*	2439.966	11.880	63.247	75.127	21.127	54.000	AVERAGE
4		2483.500	12.172	18.154	30.326	-23.674	54.000	AVERAGE
5		2485.902	12.188	18.169	30.357	-23.643	54.000	AVERAGE
6		2500.000	12.274	18.163	30.438	-23.562	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 : 2017/08/04**
Limit : FCC_SpartC_15.209_03M_PK	**Margin : 6**
Probe : CB4_FCC_EFS_B091_1-18GHz_3M_0117 - HORIZONTAL	**Power : AC 120V/60Hz**
EUT : UHD751-P	**Note : Mode 1: Tx_802.15.1_2480MHz**

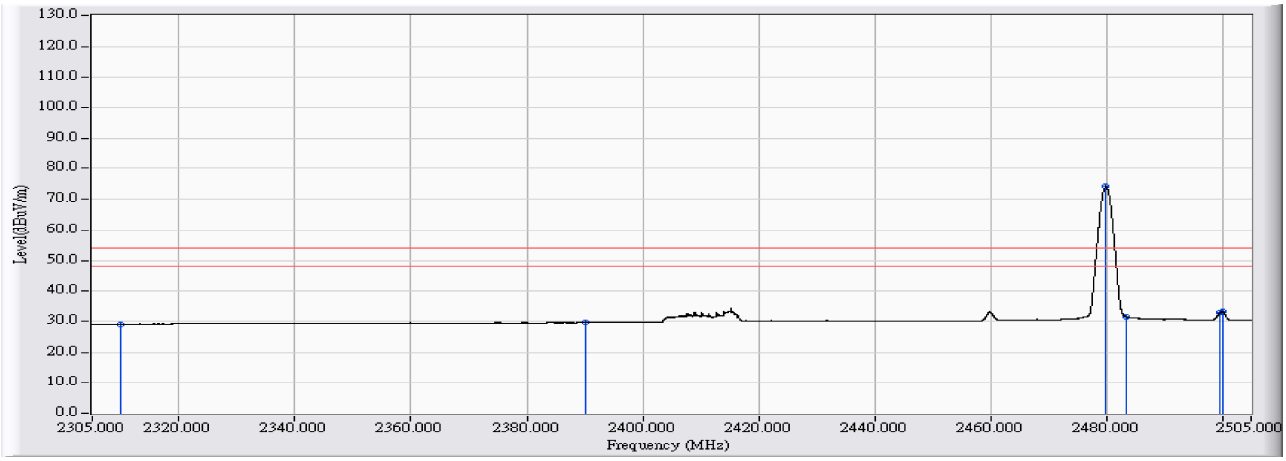


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1		2310.000	11.014	28.018	39.033	-34.967	74.000	PEAK
2		2390.000	11.544	27.559	39.103	-34.897	74.000	PEAK
3	*	2479.742	12.147	84.259	96.406	22.406	74.000	PEAK
4		2483.500	12.172	29.795	41.967	-32.033	74.000	PEAK
5		2499.540	12.273	31.360	43.633	-30.367	74.000	PEAK
6		2500.000	12.274	30.298	42.573	-31.427	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 : 2017/08/04**
Limit : FCC_SpartC_15.209_03M_AV	**Margin : 6**
Probe : CB4_FCC_EFS_B091_1-18GHz_3M_0117 - HORIZONTAL	**Power : AC 120V/60Hz**
EUT : UHD751-P	**Note : Mode 1: Tx_802.15.1_2480MHz**

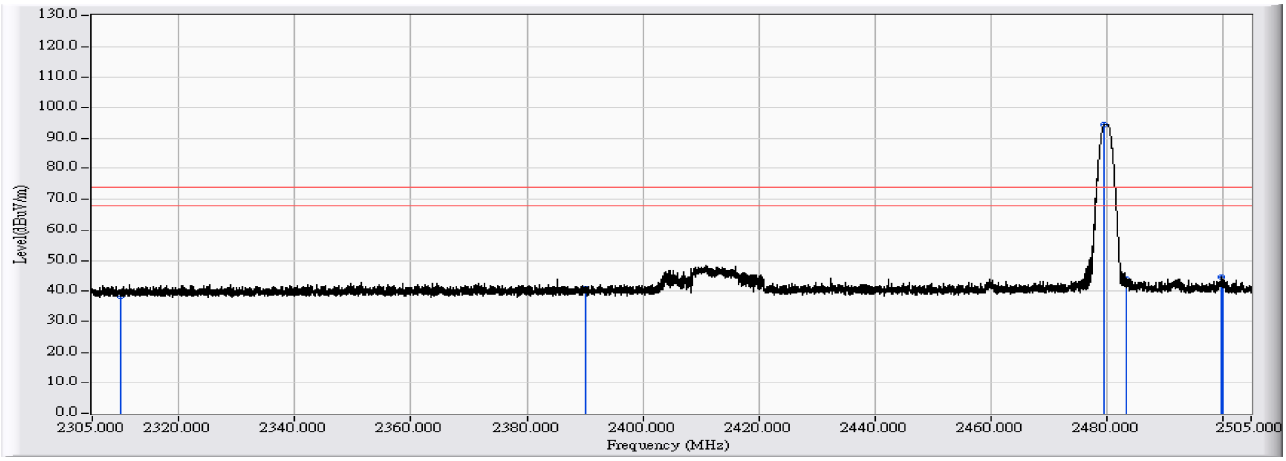


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1		2310.000	11.014	18.029	29.044	-24.956	54.000	AVERAGE
2		2390.000	11.544	17.946	29.490	-24.510	54.000	AVERAGE
3	*	2479.942	12.149	61.919	74.067	20.067	54.000	AVERAGE
4		2483.500	12.172	19.133	31.305	-22.695	54.000	AVERAGE
5		2499.700	12.274	20.541	32.815	-21.185	54.000	AVERAGE
6		2500.000	12.274	20.776	33.051	-20.949	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 : 2017/08/04**
Limit : FCC_SpartC_15.209_03M_PK	**Margin : 6**
Probe : CB4_FCC_EFS_B091_1-18GHz_3M_0117 - VERTICAL	**Power : AC 120V/60Hz**
EUT : UHD751-P	**Note : Mode 1: Tx_802.15.1_2480MHz**

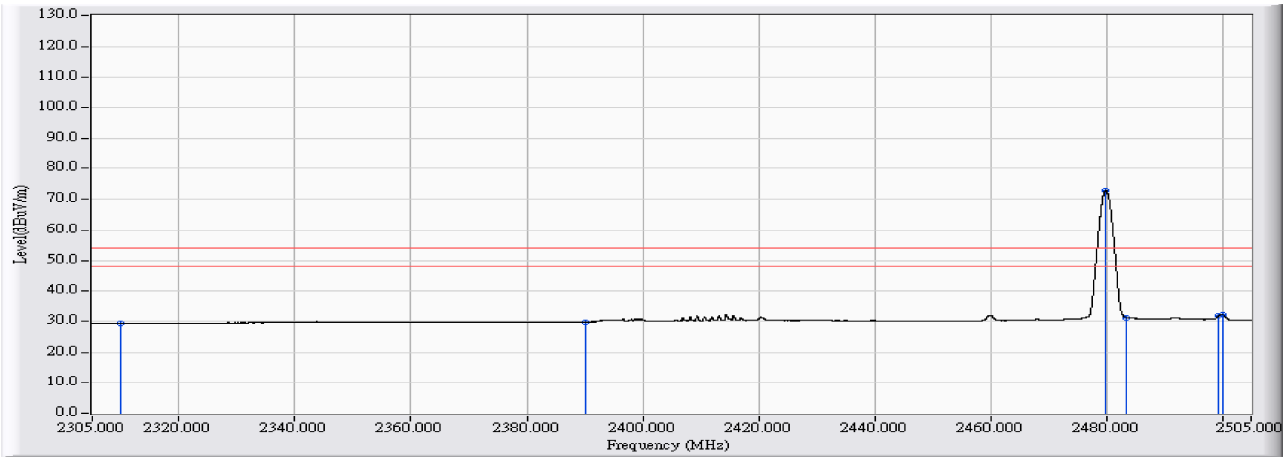


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1		2310.000	11.014	27.379	38.394	-35.606	74.000	PEAK
2		2390.000	11.544	29.124	40.668	-33.332	74.000	PEAK
3	*	2479.682	12.147	82.406	94.553	20.553	74.000	PEAK
4		2483.500	12.172	31.656	43.828	-30.172	74.000	PEAK
5		2499.880	12.274	32.271	44.546	-29.454	74.000	PEAK
6		2500.000	12.274	29.886	42.161	-31.839	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 : 2017/08/04**
Limit : FCC_SpartC_15.209_03M_AV	**Margin : 6**
Probe : CB4_FCC_EFS_B091_1-18GHz_3M_0117 - VERTICAL	**Power : AC 120V/60Hz**
EUT : UHD751-P	**Note : Mode 1: Tx_802.15.1_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	18.321	29.336	-24.664	54.000	AVERAGE
2		2390.000	11.544	18.214	29.758	-24.242	54.000	AVERAGE
3	*	2479.982	12.149	60.606	72.755	18.755	54.000	AVERAGE
4		2483.500	12.172	18.964	31.136	-22.864	54.000	AVERAGE
5		2499.480	12.273	19.426	31.699	-22.301	54.000	AVERAGE
6		2500.000	12.274	19.897	32.172	-21.828	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

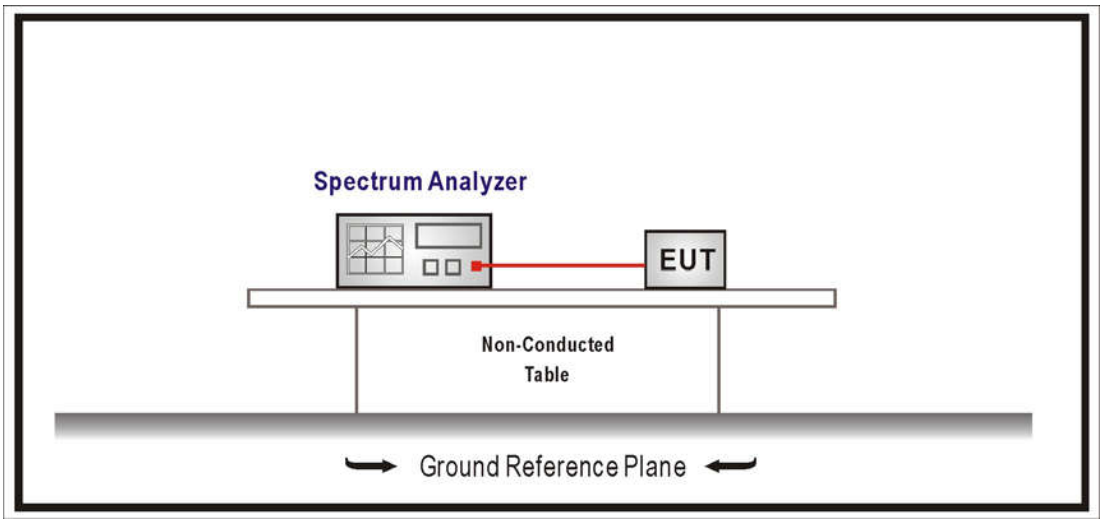
The following test equipment is used during the test:

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

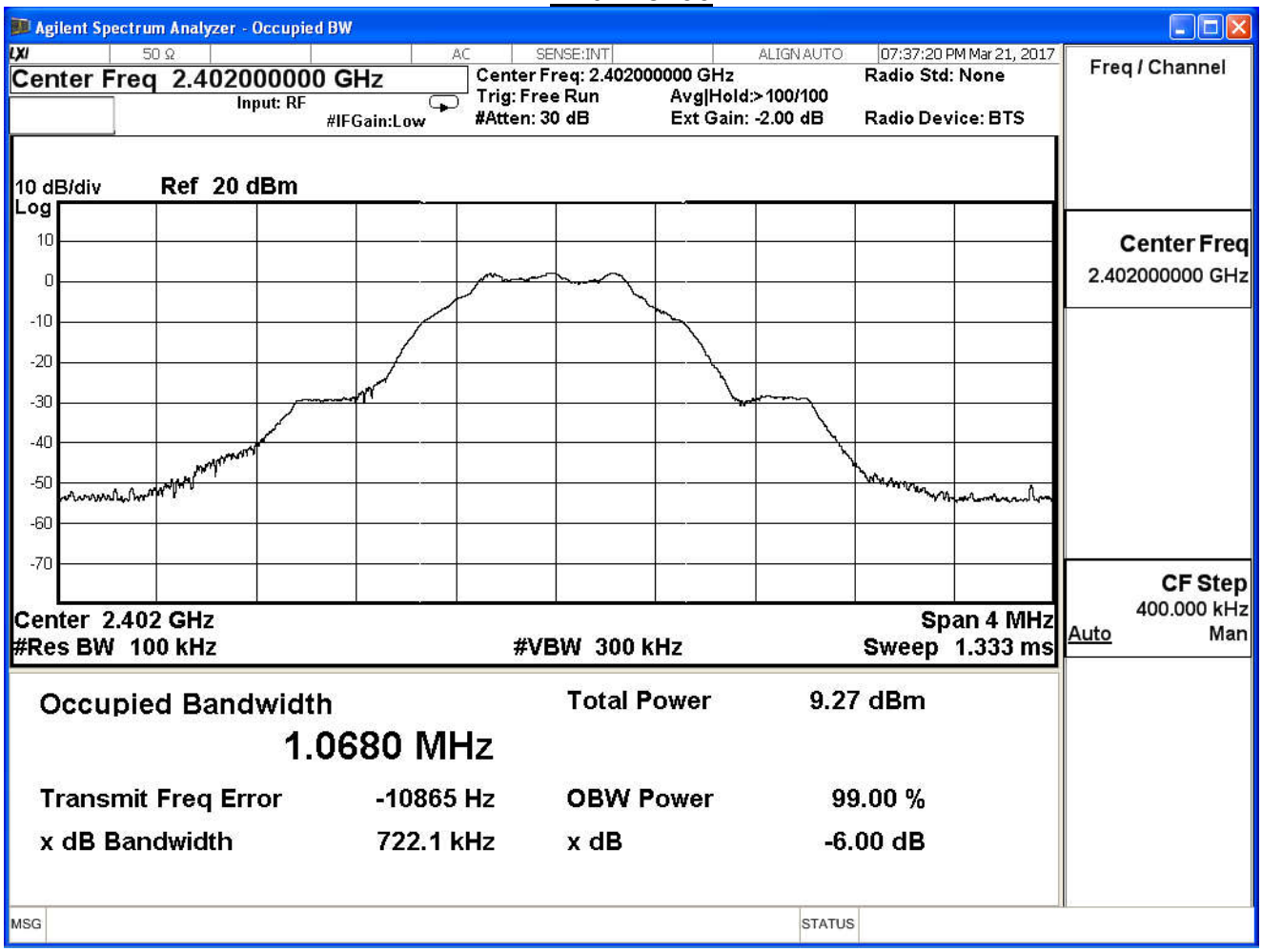
7.6. Test Result

Product	UHD751-P		
Test Item	Occupied Bandwidth		
Test Mode	Mode 1: Tx		
Date of Test	2017/03/21	Test Site	SR10-H

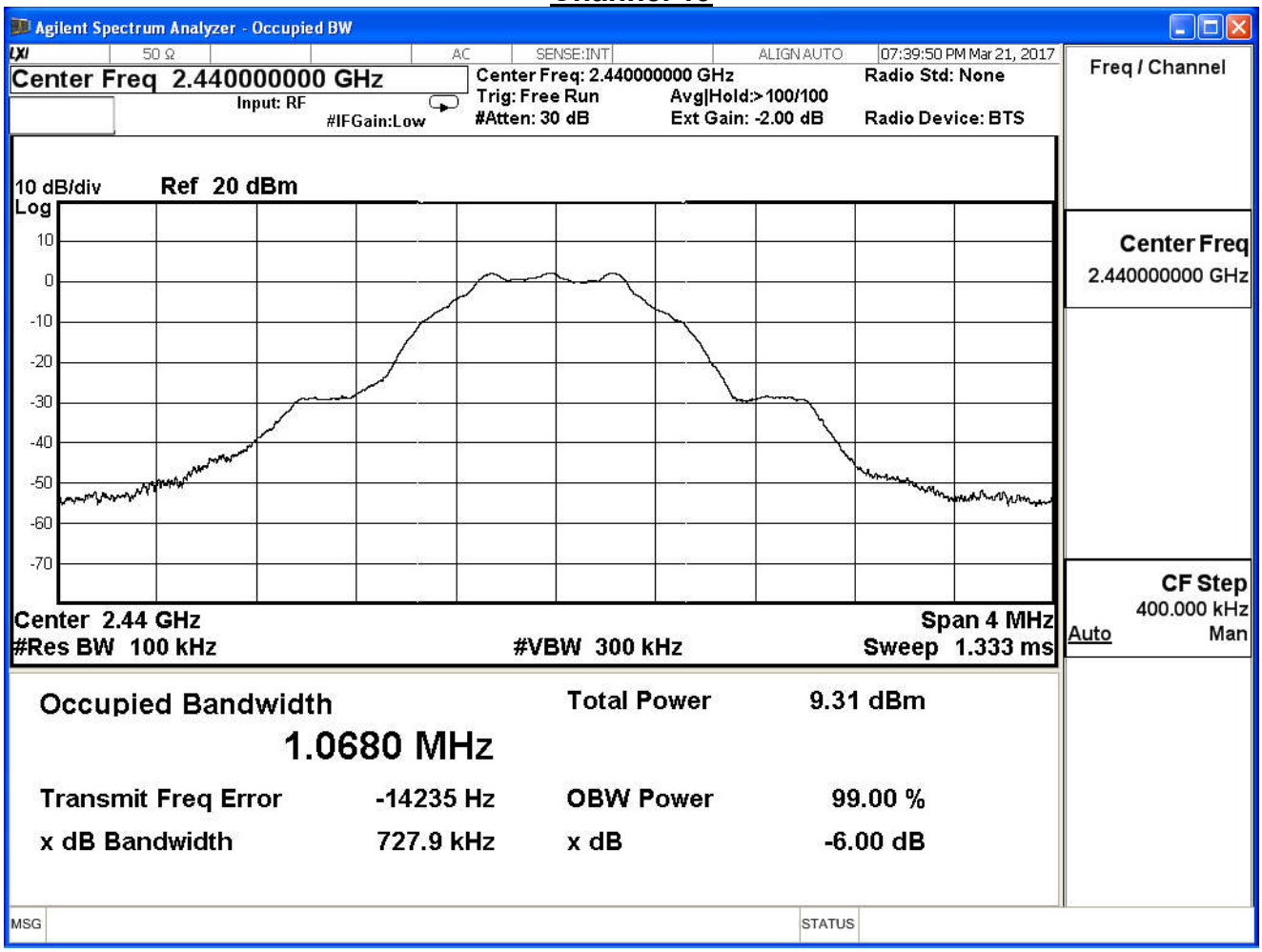
GFSK

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

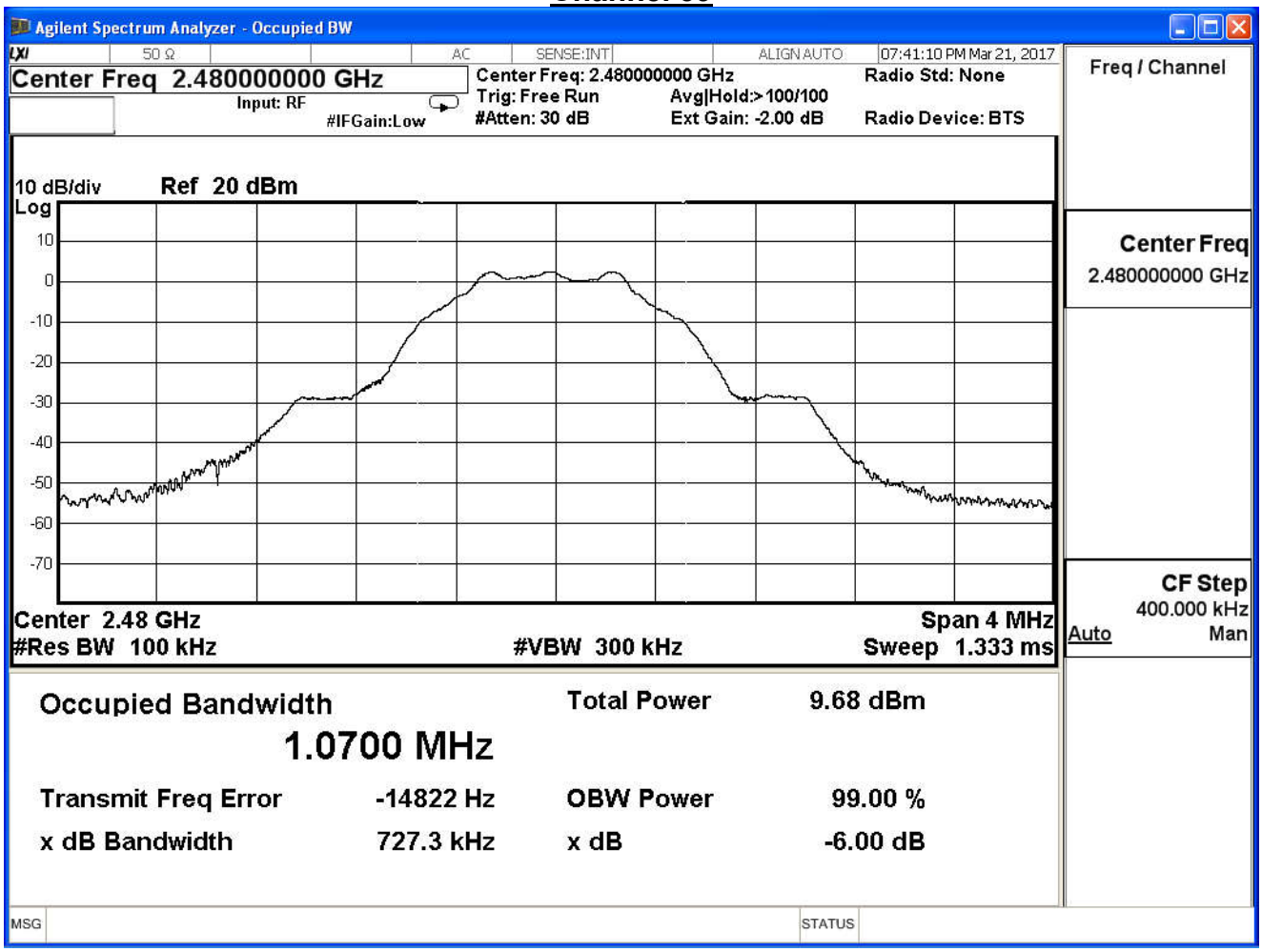
Channel 00



Channel 19


Agilent Spectrum Analyzer - Occupied BW
50 Ω
AC
SENSE:INT
ALIGN AUTO
07:39:50 PM Mar 21, 2017
Center Freq 2.440000000 GHz
Input: RF
#IFGain:Low
Center Freq: 2.440000000 GHz
Trig: Free Run
#Atten: 30 dB
Avg|Hold:>100/100
Ext Gain: -2.00 dB
Radio Std: None
Radio Device: BTS
Freq / Channel
10 dB/div
Log
Ref 20 dBm
10
0
-10
-20
-30
-40
-50
-60
-70
Center Freq
2.440000000 GHz
Center 2.44 GHz
#Res BW 100 kHz
#VBW 300 kHz
Span 4 MHz
Sweep 1.333 ms
CF Step
400.000 kHz
Auto
Man
Occupied Bandwidth
1.0680 MHz
Total Power
9.31 dBm
Transmit Freq Error
-14235 Hz
OBW Power
99.00 %
x dB Bandwidth
727.9 kHz
x dB
-6.00 dB
MSG
STATUS

Channel 39


Agilent Spectrum Analyzer - Occupied BW
50 Ω
AC
SENSE:INT
ALIGN AUTO
07:41:10 PM Mar 21, 2017
Center Freq 2.480000000 GHz
Input: RF
#IFGain:Low
Center Freq: 2.480000000 GHz
Trig: Free Run
#Atten: 30 dB
Avg|Hold:>100/100
Ext Gain: -2.00 dB
Radio Std: None
Radio Device: BTS
Freq / Channel
10 dB/div
Log
Ref 20 dBm
10
0
-10
-20
-30
-40
-50
-60
-70
Center Freq
2.480000000 GHz
Center 2.48 GHz
#Res BW 100 kHz
#VBW 300 kHz
Span 4 MHz
Sweep 1.333 ms
CF Step
400.000 kHz
Auto
Man
Occupied Bandwidth
1.0700 MHz
Total Power
9.68 dBm
Transmit Freq Error
-14822 Hz
OBW Power
99.00 %
x dB Bandwidth
727.3 kHz
x dB
-6.00 dB
MSG
STATUS

8. Power Density

8.1. Test Equipment

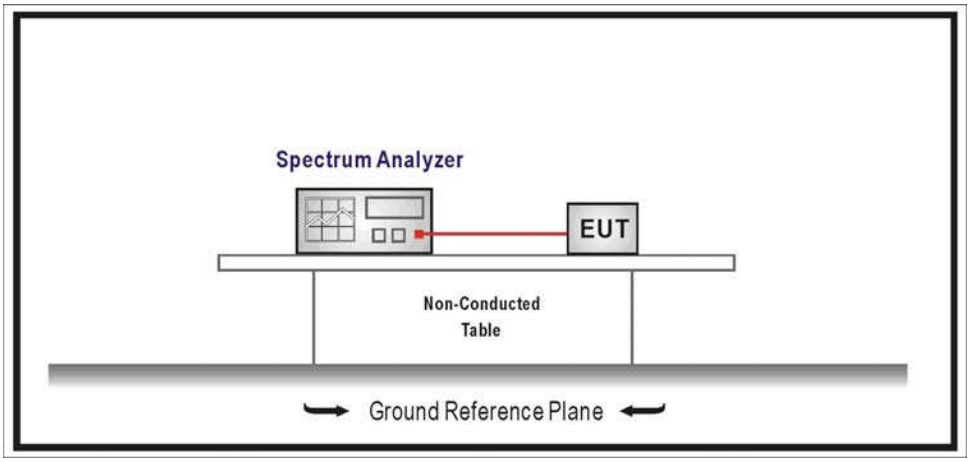
The following test equipment is used during the test:

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

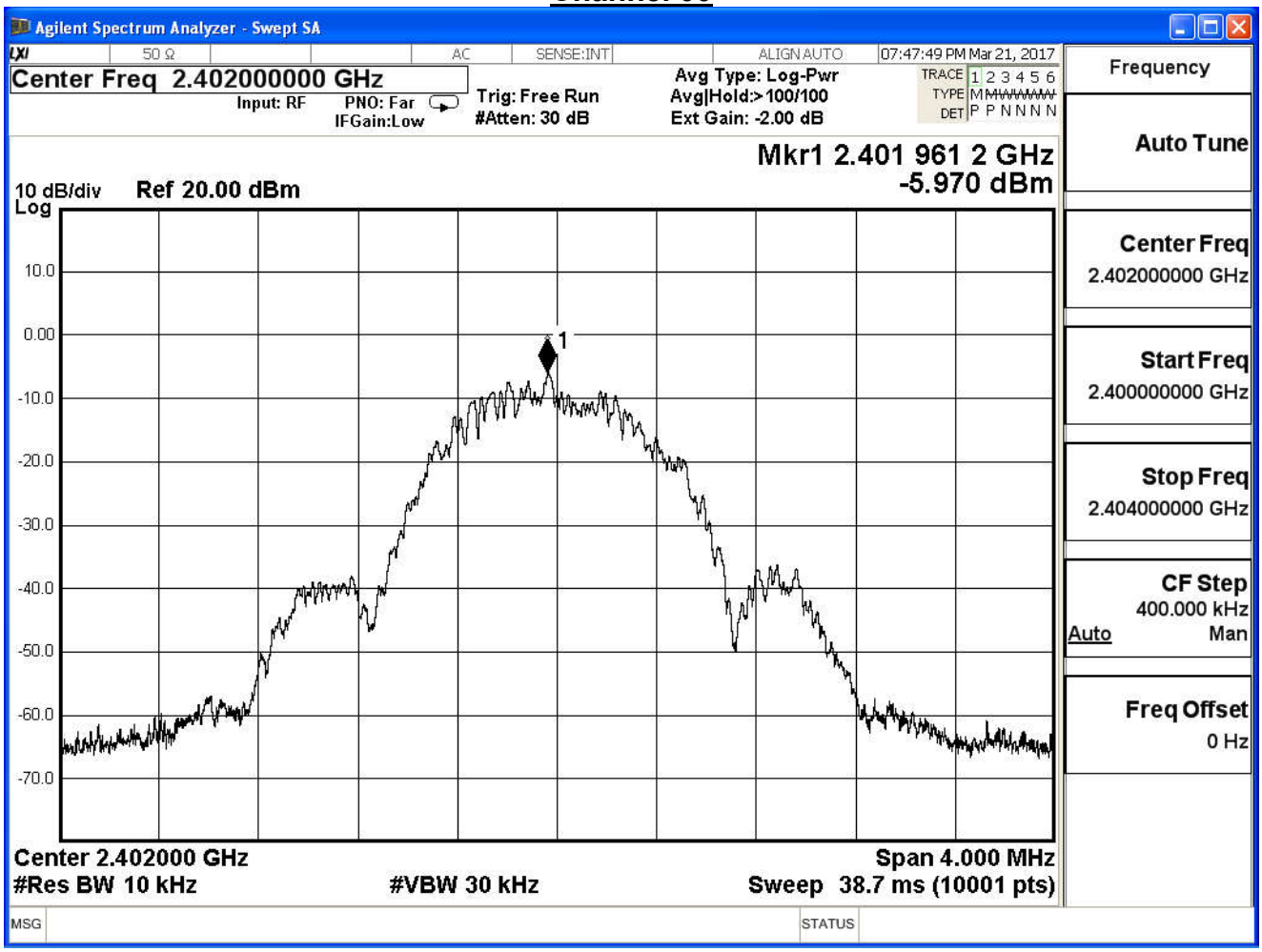
The measurement uncertainty is defined as ±1.27dB.

8.7. Test Result

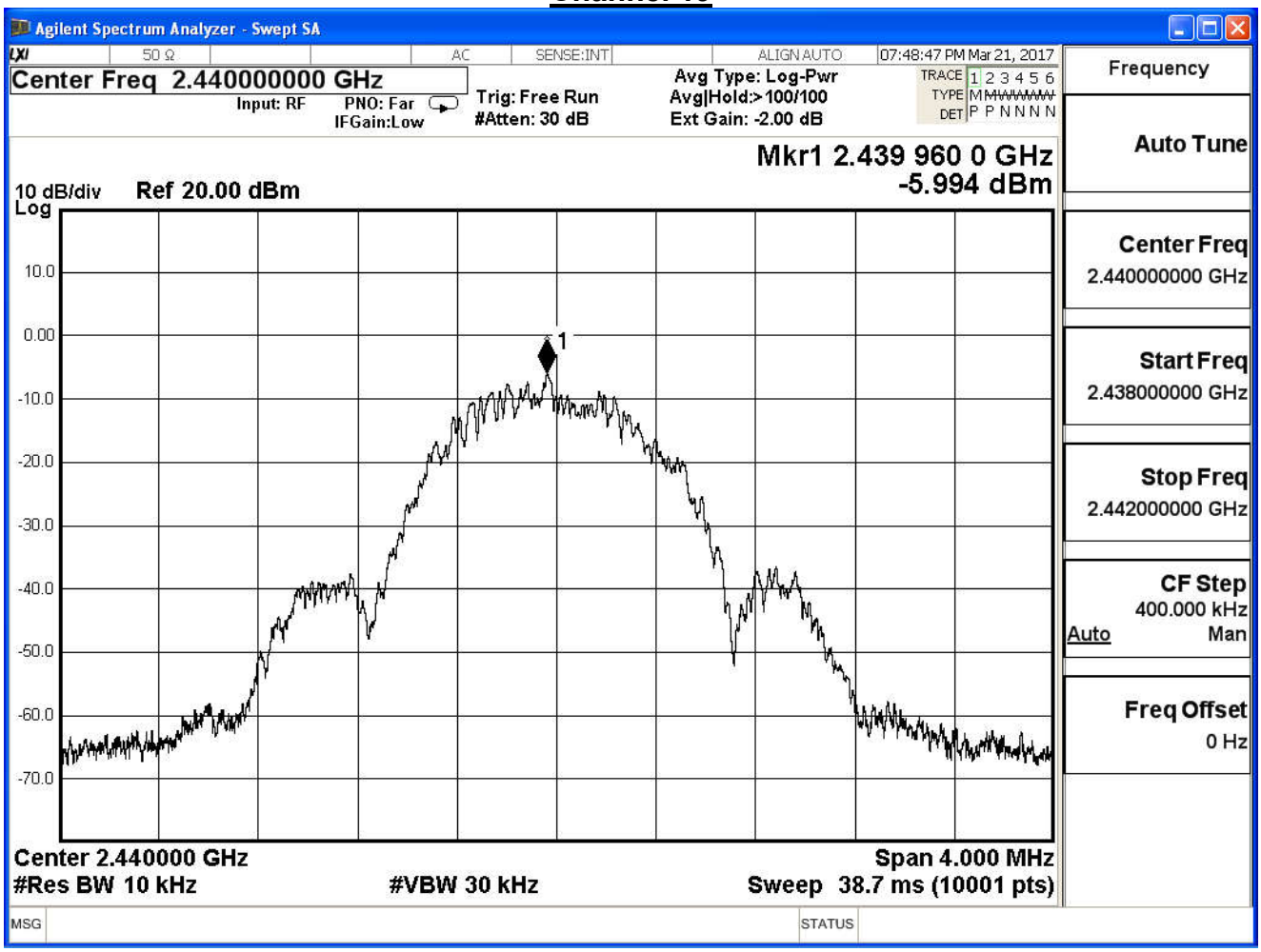
Product	UHD751-P		
Test Item	Power Density		
Test Mode	Mode 1: Tx		
Date of Test	2017/03/21	Test Site	SR7

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

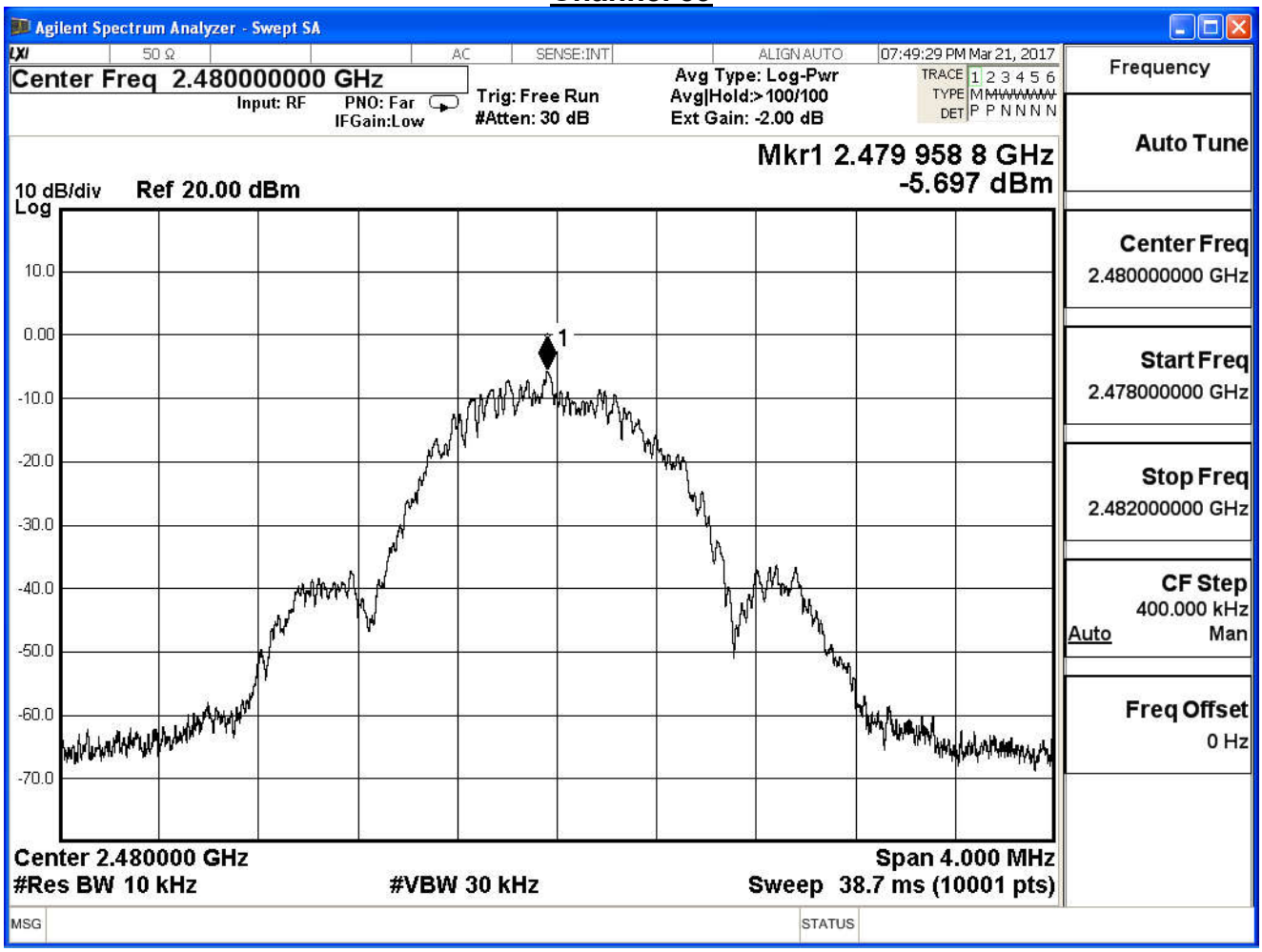
Channel 00



Channel 19


Agilent Spectrum Analyzer - Swept SA
50 Ω
AC
SENSE:INT
ALIGN AUTO
07:48:47 PM Mar 21, 2017
Center Freq 2.440000000 GHz
Input: RF
PNO: Far
IFGain:Low
Trig: Free Run
#Atten: 30 dB
Avg Type: Log-Pwr
Avg|Hold:>100/100
Ext Gain: -2.00 dB
TRACE 1 2 3 4 5 6
TYPE M
DET P P N N N N
Mkr1 2.439 960 0 GHz
-5.994 dBm
10 dB/div
Log
Ref 20.00 dBm
10.0
0.00
-10.0
-20.0
-30.0
-40.0
-50.0
-60.0
-70.0
1
Center 2.440000 GHz
#Res BW 10 kHz
#VBW 30 kHz
Span 4.000 MHz
Sweep 38.7 ms (10001 pts)
MSG
STATUS
Frequency
Auto Tune
Center Freq
2.440000000 GHz
Start Freq
2.438000000 GHz
Stop Freq
2.442000000 GHz
CF Step
400.000 kHz
Auto
Man
Freq Offset
0 Hz

Channel 39


Agilent Spectrum Analyzer - Swept SA
50 Ω
AC
SENSE:INT
ALIGN AUTO
07:49:29 PM Mar 21, 2017
Center Freq 2.480000000 GHz
Input: RF
PNO: Far
IFGain:Low
Trig: Free Run
#Atten: 30 dB
Avg Type: Log-Pwr
Avg|Hold:>100/100
Ext Gain: -2.00 dB
TRACE 1 2 3 4 5 6
TYPE M
DET P P N N N N
Mkr1 2.479 958 8 GHz
-5.697 dBm
10 dB/div
Log
Ref 20.00 dBm
10.0
0.00
-10.0
-20.0
-30.0
-40.0
-50.0
-60.0
-70.0
Center 2.480000 GHz
#Res BW 10 kHz
#VBW 30 kHz
Span 4.000 MHz
Sweep 38.7 ms (10001 pts)
MSG
STATUS
Frequency
Auto Tune
Center Freq
2.480000000 GHz
Start Freq
2.478000000 GHz
Stop Freq
2.482000000 GHz
CF Step
400.000 kHz
Auto
Man
Freq Offset
0 Hz