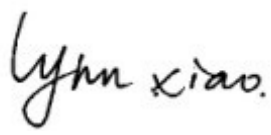

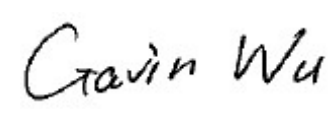




## TEST REPORT

<b>Report No.:</b>	<b>EM201400314-1</b>	<b>Application No.:</b>	<b>ZJ00043435-1</b>
<b>Client:</b>	DIGICare Technology Limited		
<b>Address:</b>	Room 1509,coast Times East,Shennan,Avenue 12069,Nanshan,Shenzhen,Guangdong		
<b>Sample Description:</b>	ERI		
<b>Model:</b>	DC-WT-01		
<b>Adding Model</b>	ERI		
<b>FCC ID:</b>	2ACC4DC168		
<b>Test Specification:</b>	FCC Part 15,Subpart C(Section 15.247)		
<b>Test Date:</b>	2014-04-11 to 2014-05-12		
<b>Issue Date:</b>	2014-05-12		
<b>Test Result:</b>	PASS		
<b>Prepared By:</b>	<b>Reviewed By:</b>	<b>Approved By:</b>	
Lynn Xiao/ Test Engineer	Jane Cao / Technical Assistance	Gavin Wu / Manager	
			
Date:2014-05-12	Date:2014-05-12	Date:2014-05-12	
<b>Other Aspects:</b>			
/			
<b>Abbreviations:</b> ok / P = passed; fail / F = failed; n.a. / N = not applicable			
The test result in this test report refers exclusively to the presented test sample. This report shall not be reproduced except in full, without the written approval of GRGT.			

GRG Metrology and Test Co., Ltd.

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Tel:+86-20-38699960

Fax:+86-20-38695185

Email: [cert-center@grg.net.cn](mailto:cert-center@grg.net.cn)

<http://www.grgtest.com>

Ver.:1.0 / 01.Jan.2011

## **DIRECTIONS OF TEST**

1. This station carries out test task according to the national regulation of verifications which can be traced to National Primary Standards and BIPM.
2. The test report merely corresponds to the test sample. It is not permitted to copy extracts of these test result without the written permission of the test laboratory.
3. If there is any objection concerning the test, the client should inform the laboratory within 15 days from the date of receiving the test report.

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**1. TEST RESULT SUMMARY**

<b>Section B of FCC Part 15.247:2012</b>			
<b>Standard</b>	<b>Item</b>	<b>Limit / Severity</b>	<b>Result</b>
FCC Part 15, Subpart C (15.247)	Antenna Requirement	§15.203	PASS
	Conducted Emissions	§15.207 (a)	PASS
	Radiated Electromagnetic Disturbance	§15.247(d)	PASS
	6 Db Bandwidth	§15.247 (a)(2)	PASS
	Maximum Peak Output Power	§15.247(b)(3)	PASS
	Power Spectral Density	§15.247(e)	PASS
	Emissions In Non-Rest ricted Frequency Bands	§15.247(d)	PASS
	Emissions In Restricted Frequency Bands	§15.205	PASS
	Band-Edge Measurements	§15.247(d)	PASS

## 2. GENERAL DESCRIPTION OF EUT

### 2.1 APPLICANT

Name: DIGICare Technology Limited  
Address: Room 1509,coast Times East,Shennan,Avenue 12069,Nanshan,Shenzhen,  
Guangdong

### 2.2 MANUFACTURER

Name: DIGICare Technology Limited  
Address: Room 1509,coast Times East,Shennan,Avenue 12069,Nanshan,Shenzhen,  
Guangdong

### 2.3 BASIC DESCRIPTION OF EQUIPMENT UNDER TEST

Equipment: ERI  
Model No.: DC-WT-01  
Adding Model ERI  
Trade Name: DIGICare  
Power supply: DC 5V  
Battery: 3.7V 80mAh  
Frequency Range 2402MHZ~ 2480MHz  
Max Antenna 2dBi  
gain:  
Modulation type: Bluetooth 4.0: GFSK  
Note: /

### 3. LABORATORY AND ACCREDITATIONS

#### 3.1 LABORATORY

The tests and measurements refer to this report were performed by Guangzhou GRG Metrology and Test CO., LTD.

Add. : 163 Pingyun Rd, West of Huangpu Ave, Guangzhou, 510656, P. R. China

Telephone: +86-20-38699959, 38699960, 38699961

Fax : +86-20-38695185

#### 3.2 ACCREDITATIONS

Our laboratories are accredited and approved by the following approval agencies according to ISO/IEC 17025.

<b>USA</b>	FCC Listed Lab (No. 688188)
<b>China</b>	CNAS (No.L0446)
<b>China</b>	DILAC (No.DL175)
<b>Canada</b>	Registration No.:8355A-1

#### 3.3 MEASUREMENT UNCERTAINTY

Where relevant, the following measurement uncertainty levels have been estimated for tests performed on the EUT as specified in CISPR 16-4-2:

Measurement		Frequency	Uncertainty
Radiated Emission	Horizontal	30MHz~1000MHz	4.2dB
		1GHz~26.5GHz	4.2dB
	Vertical	30MHz~1000MHz	4.4dB
		1GHz~26.5GHz	4.4dB
Conducted Emission		9kHz~30MHz	3.1 dB

This uncertainty represents an expanded uncertainty factor of  $k=2$ .

### 3.4 LIST OF USED TEST EQUIPMENT AT GRGT

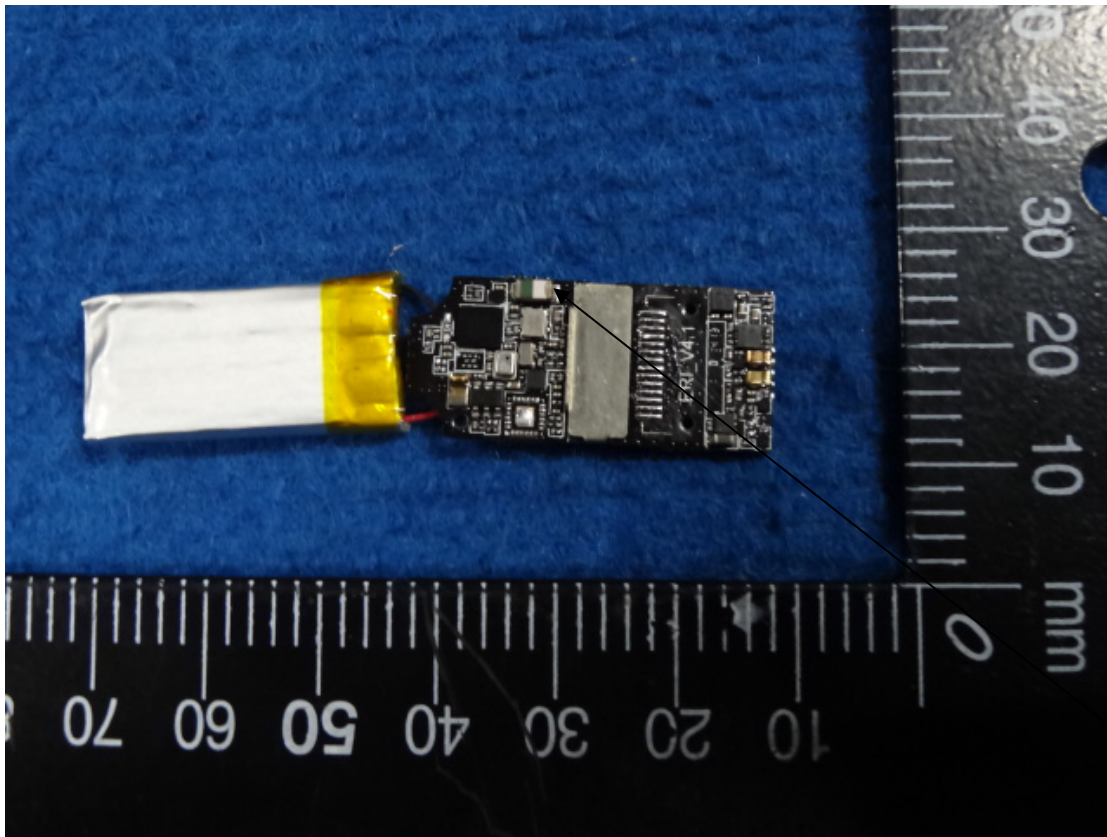
Name of Equipment	Manufacturer	Model	Serial Number	Calibration Due
<b>Conducted Emissions</b>				
EMI Receiver	R&S	ESU40	100529	2014-07-21
L.I.S.N	SCHWARZBECK	NSLK 8127	8127450	2014-08-21
<b>Spurious Emissions at Antenna Port</b>				
Receiver	R&S	ESU40	100106	2015-01-26
<b>Restricted Bands</b>				
Receiver	R&S	ESU40	100106	2015-01-26
<b>Spurious Emissions</b>				
Receiver	R&S	ESU40	100106	2015-01-26
Signal Generator	R&S	SML03	103002	2014-11-14
Biconical Log-periodic Antenna	ETS.LINDGREN	3142C	00075971	2016-04-17
Horn antenna	SCHWARZBECK	BBHA9120D	D752	2015-11-24
<b>6 dB Bandwidth</b>				
Receiver	R&S	ESU40	100106	2015-01-26
<b>Maximum Peak Output Power</b>				
Receiver	R&S	ESU40	100106	2015-01-26
<b>100kHz Bandwidth of Frequency Band Edge</b>				
Receiver	R&S	ESU40	100106	2015-01-26
<b>Power Spectral Density</b>				
Receiver	R&S	ESU40	100106	2015-01-26

**NOTE:** The calibration interval of the above test instruments is 12 months.

#### 4. ANTENNA REQUIREMENT

The antennas are Multilayer Chip Antenna.

The max gain of antenna is 2dBi and .which accordance 15.203.is considered sufficient to comply with the provisions of this section.



Antenna



## 5. CONDUCTED EMISSION MEASUREMENT

### 5.1 LIMITS

Frequency range	Limits (dB $\mu$ V)	
	Quasi-peak	Average
150kHz $\sim$ 0.5MHz	66 $\sim$ 56	56 $\sim$ 46
0.5 MHz $\sim$ 5 MHz	56	46
5 MHz $\sim$ 30 MHz	60	50

**NOTE:** (1) The lower limit shall apply at the transition frequencies.

(2) The limit decreases in line with the logarithm of the frequency in the range of 150 kHz to 0.5MHz.

### 5.2 TEST PROCEDURES

#### Procedure of Preliminary Test

Test procedures follow ANSI C63.4:2009.

For measurement of the disturbance voltage the equipment under test (EUT) is connected to the power supply mains and any other extended network via one or more artificial network(s). An EUT, whether intended to be grounded or not, and which is to be used on a table is configured as follows:

- Either the bottom or the rear of the EUT shall be at a controlled distance of 40 cm from a reference ground plane. This ground plane is normally the wall or floor of a shielded room. It may also be a grounded metal plane of at least 2 m by 2 m. This is physically accomplished as follows:

- 1) place the EUT on a table of non-conducting material which is at least 80 cm high. Place the EUT so that it is 40 cm from the wall of the shielded room, or

- 2) place the EUT on a table of non-conducting material which is 40 cm high so that the bottom of the EUT is 40 cm above the ground plane;

- All other conductive surfaces of the EUT shall be at least 80 cm from the reference ground plane;

- The EUT are placed on the floor that one side of the housings is 40 cm from the vertical reference ground plane and other metallic parts;

- Interconnecting cables that hang closer than 40 cm to the ground plane shall be folded back and forth forming a bundle 30 cm to 40 cm long, hanging approximately in the middle between the ground plane and the table.

- I/O cables that are connected to a peripheral shall be bundled in the centre. The end of the cable may be terminated if required using correct terminating impedance. The total length shall not exceed 1 m.

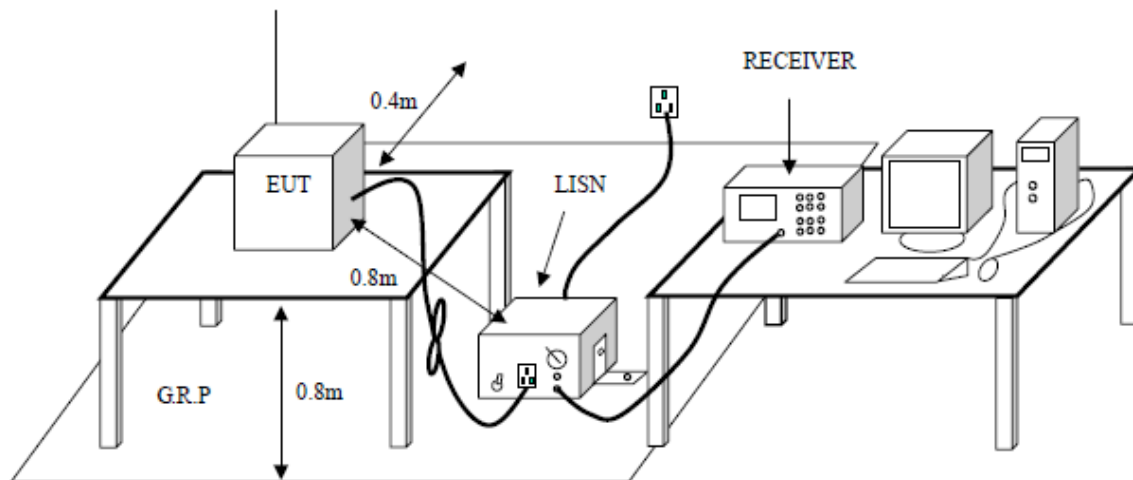
The test mode(s) described in Item 2.4 were scanned during the preliminary test. After the preliminary scan, we found the test mode described in Item 2.4 producing the highest emission level. The EUT configuration and cable configuration of the above highest emission levels were recorded for reference of the final test.

#### Procedure of Final Test

EUT and support equipment were set up on the test bench as per the configuration with highest emission level in the preliminary test. A scan was taken on both power lines,

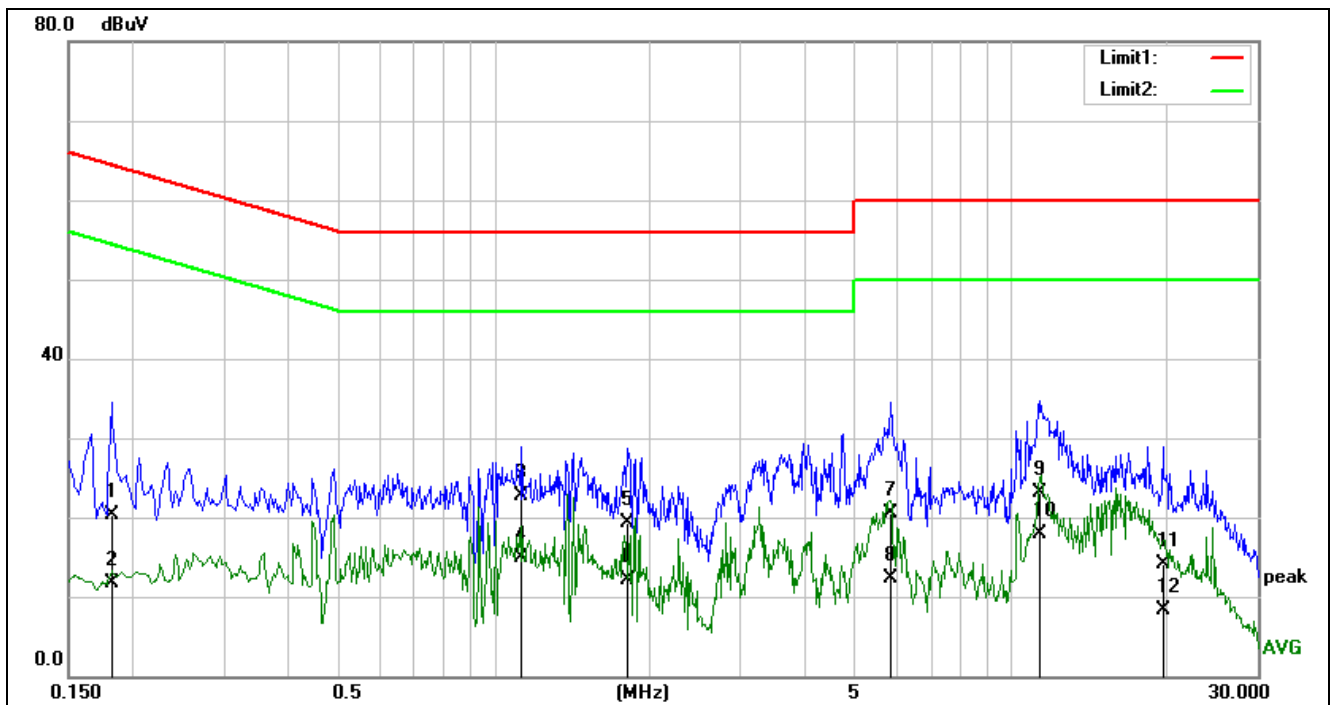
recording at least the six highest emissions. Emission frequency and amplitude were recorded into a computer in which correction factors were used to calculate the emission level and compare reading to the applicable limit. The test data of the worst-case condition(s) was recorded.

### 5.3 TEST SETUP



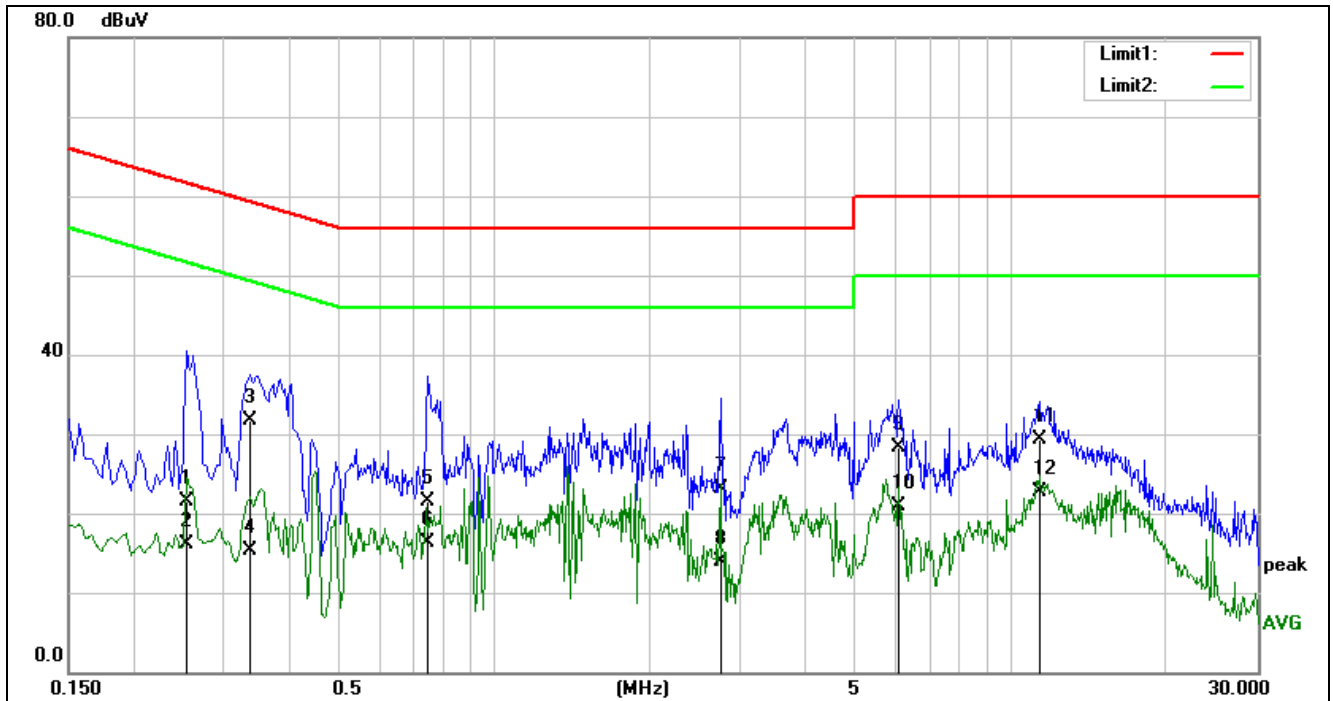
## 5.4 TEST RESULTS

<b>Project No.:</b>	<b>ZJ00043531-1</b>	<b>Probe:</b>	<b>L1</b>
<b>Standard:</b>	<b>(CE)FCC PART 15 class B _QP</b>	<b>Power Source:</b>	<b>AC 120V/60Hz</b>
<b>Test item:</b>	<b>Conduction Test</b>	<b>Date:</b>	<b>2014-5-9</b>
<b>Temp./Hum.(%RH):</b>	<b>21/56%RH</b>	<b>Time:</b>	<b>10:08:28</b>
<b>EUT:</b>	<b>ERI</b>	<b>Test Result:</b>	<b>Pass</b>
<b>Model:</b>	<b>DC-WT-01</b>		
<b>Note:</b>			



No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB)	Result (dBuV)	Limit (dBuV)	Margin (dB)	Remark
1	0.1814	13.78	6.52	20.30	64.42	-44.12	QP
2	0.1814	5.18	6.52	11.70	54.42	-42.72	AVG
3	1.1291	16.24	6.56	22.80	56.00	-33.20	QP
4	1.1291	8.34	6.56	14.90	46.00	-31.10	AVG
5	1.8096	12.82	6.58	19.40	56.00	-36.60	QP
6	1.8096	5.62	6.58	12.20	46.00	-33.80	AVG
7	5.8357	13.77	6.73	20.50	60.00	-39.50	QP
8	5.8357	5.57	6.73	12.30	50.00	-37.70	AVG
9	11.3170	16.47	6.73	23.20	60.00	-36.80	QP
10	11.3170	11.17	6.73	17.90	50.00	-32.10	AVG
11	19.6354	7.04	7.16	14.20	60.00	-45.80	QP
12	19.6354	1.24	7.16	8.40	50.00	-41.60	AVG

<b>Project No.:</b>	<b>ZJ00043531-1</b>	<b>Probe:</b>	<b>N</b>
<b>Standard:</b>	<b>(CE)FCC PART 15 class B _QP</b>	<b>Power Source:</b>	<b>AC 120V/60Hz</b>
<b>Test item:</b>	<b>Conduction Test</b>	<b>Date:</b>	<b>2014-5-9</b>
<b>Temp./Hum.(%RH):</b>	<b>21/56%RH</b>	<b>Time:</b>	<b>9:59:27</b>
<b>EUT:</b>	<b>ERI</b>	<b>Test Result:</b>	<b>Pass</b>
<b>Model:</b>	<b>DC-WT-01</b>		
<b>Note:</b>			



No.	Frequency (MHz)	Reading (dBuV)	Correct Factor(dB)	Result (dBuV)	Limit (dBuV)	Margin (dB)	Remark
1	0.2540	15.00	6.50	21.50	61.62	-40.12	QP
2	0.2540	9.60	6.50	16.10	51.62	-35.52	AVG
3	0.3379	25.30	6.50	31.80	59.25	-27.45	QP
4	0.3379	8.90	6.50	15.40	49.25	-33.85	AVG
5	0.7460	15.13	6.47	21.60	56.00	-34.40	QP
6	0.7460	9.93	6.47	16.40	46.00	-29.60	AVG
7	2.7500	16.41	6.69	23.10	56.00	-32.90	QP
8	2.7500	7.21	6.69	13.90	46.00	-32.10	AVG
9	6.0820	21.56	6.74	28.30	60.00	-31.70	QP
10	6.0820	14.16	6.74	20.90	50.00	-29.10	AVG
11	11.3820	22.66	6.74	29.40	60.00	-30.60	QP
12	11.3820	15.96	6.74	22.70	50.00	-27.30	AVG

## 6. RADIATED ELECTROMAGNETIC DISTURBANCE

### 6.1 LIMITS

Frequency (MHz)	Quasi-peak(dBμV/m)
30 ~ 88	40
88~216	43.5
216 ~ 960	46
Above 960	54

**NOTE:** (1) The lower limit shall apply at the transition frequencies.

Frequency (GHz)	Quasi-peak(dBμV/m)
1 ~ 26.5	74
1~ 26.5	54

### 6.2 TEST PROCEDURES

Test procedures follow ANSI C63.10:2009,

#### **Procedure of Preliminary Test**

Radiated emission tests shall be made with the receive or transmit antenna located at a horizontal distance of 3 m plus half of the maximum width of the EUT being tested, measured from the centre of the EUT. The tests shall be performed with the equipment configured as closely as possible to its typical, practical operation. Unless stated otherwise, cables and wiring shall be as specified by the manufacturer and the equipment shall be in its housing (or cabinet) with all covers and access panels in place. Any deviation from normal EUT operating conditions shall be included in the test report.

The EUT (on a non-conductive support structure, where applicable) shall be placed on a remotely operated turntable, to allow the EUT to be rotated. The height of the EUT above the ground plane shall be according to the following requirements.

- Table-top equipment is placed on a non-conductive set-up table with height  $0,8\text{ m} \pm 0,01\text{ m}$ , ANSI C63.10:2009, specifies the method to determine the impact of the non-conductive set-up table on test results.
- Floor-standing equipment is placed on a non-conductive support, as specified in the applicable product standard. If there are no EUT height placement requirements in the product standard, the EUT shall be placed on a non-conductive support at a height of 5 cm to 15 cm above the ground plane.

Interface cables, loads, and devices should be connected to at least one of each type of the interface ports of the EUT and, where practical, each cable shall be terminated in a device typical for its actual use. Where there are multiple interface ports of the same type, a typical number of these devices shall be connected to devices or loads. It is sufficient to connect only one of the loads, provided that it can be shown, for example by preliminary testing, that the connection of further ports would not significantly increase the level of disturbance (that is, more than 2 dB) or significantly degrade the immunity level.

The test mode(s) described in Item 2.4 were scanned during the preliminary test. After the preliminary scan, we found the test mode described in Item 2.4 producing the highest emission level. The EUT and cable configuration, antenna position, polarization and turntable position of the above highest emission level were recorded for the final test.

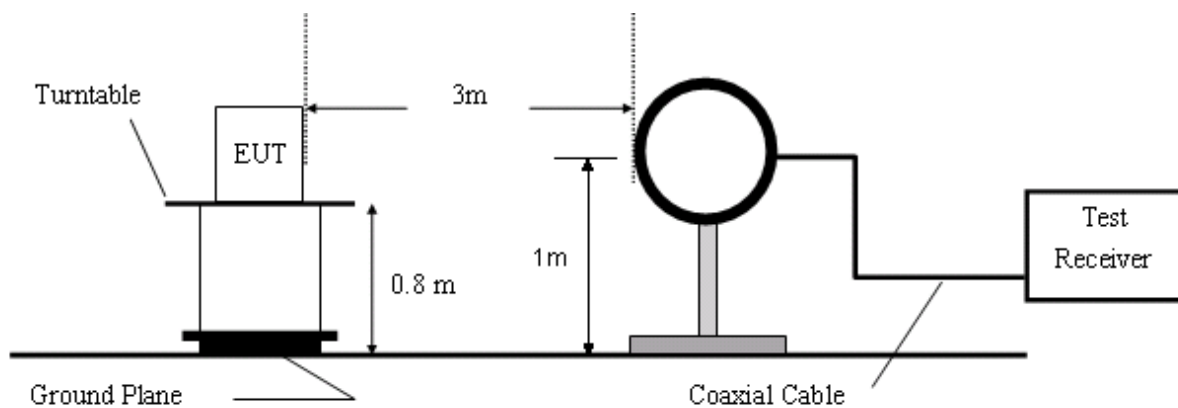
**Procedure of Final Test**

EUT and support equipment were set up on the turntable as per the configuration with highest emission level in the preliminary test. The Analyzer / Receiver scanned from 30MHz to 1000MHz. Emissions were scanned and measured rotating the EUT to 360 degrees, varying cable placement and positioning the antenna 1 to 4 meters above the ground plane, in both the vertical and the horizontal polarization, to maximize the emission reading level. Record at least six highest emissions. Emission frequency, amplitude, antenna position, polarization and turntable position were recorded into a computer in which correction factors were used to calculate the emission level and compare reading to the applicable limit and only QP reading is presented. The test data of the worst-case condition(s) was recorded.

**Procedure of Final Test**

EUT and support equipment were set up on the test bench as per the configuration with highest emission level in the preliminary test. A scan was taken on both power lines, recording at least the six highest emissions. Emission frequency and amplitude were recorded into a computer in which correction factors were used to calculate the emission level and compare reading to the applicable limit. The test data of the worst-case condition(s) was recorded.

**Pre-test for EUT in X,Y,Z axes and find the X axe is the worst case. The worst case emissions were reported.**

**6.3 TEST SETUP**

**Figure 1. 9KHz to 30MHz radiated emissions test configuration**

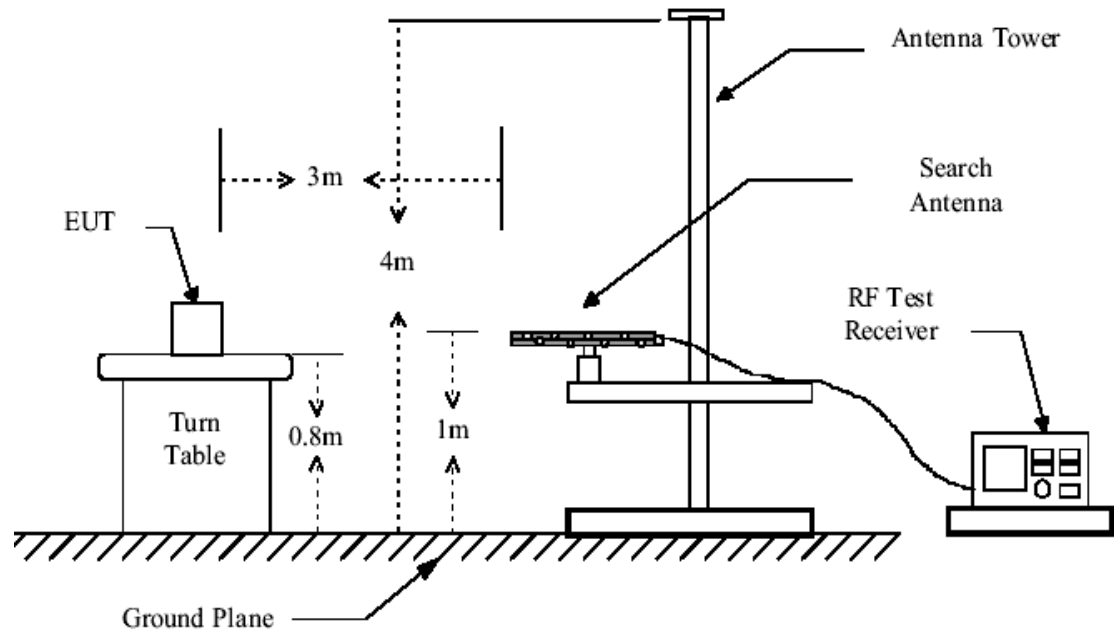


Figure 2. 30MHz to 1GHz radiated emissions test configuration

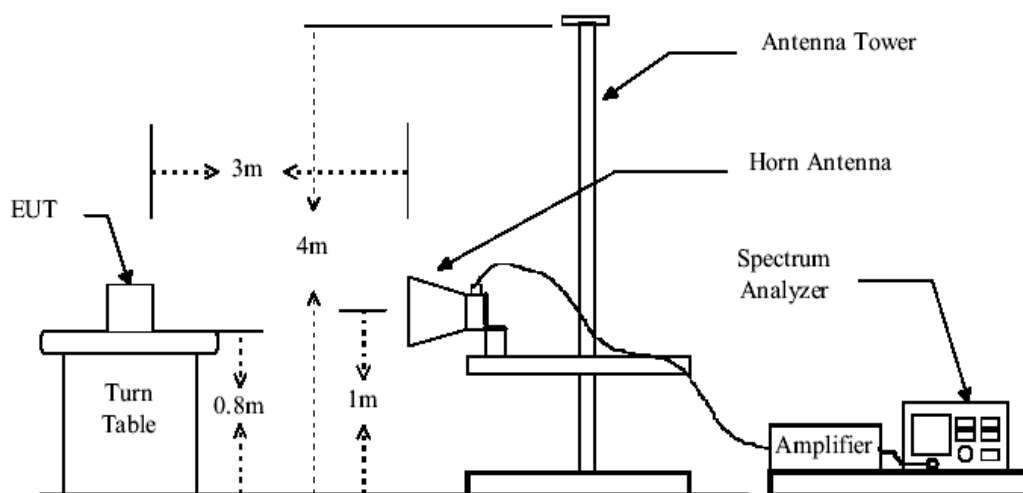
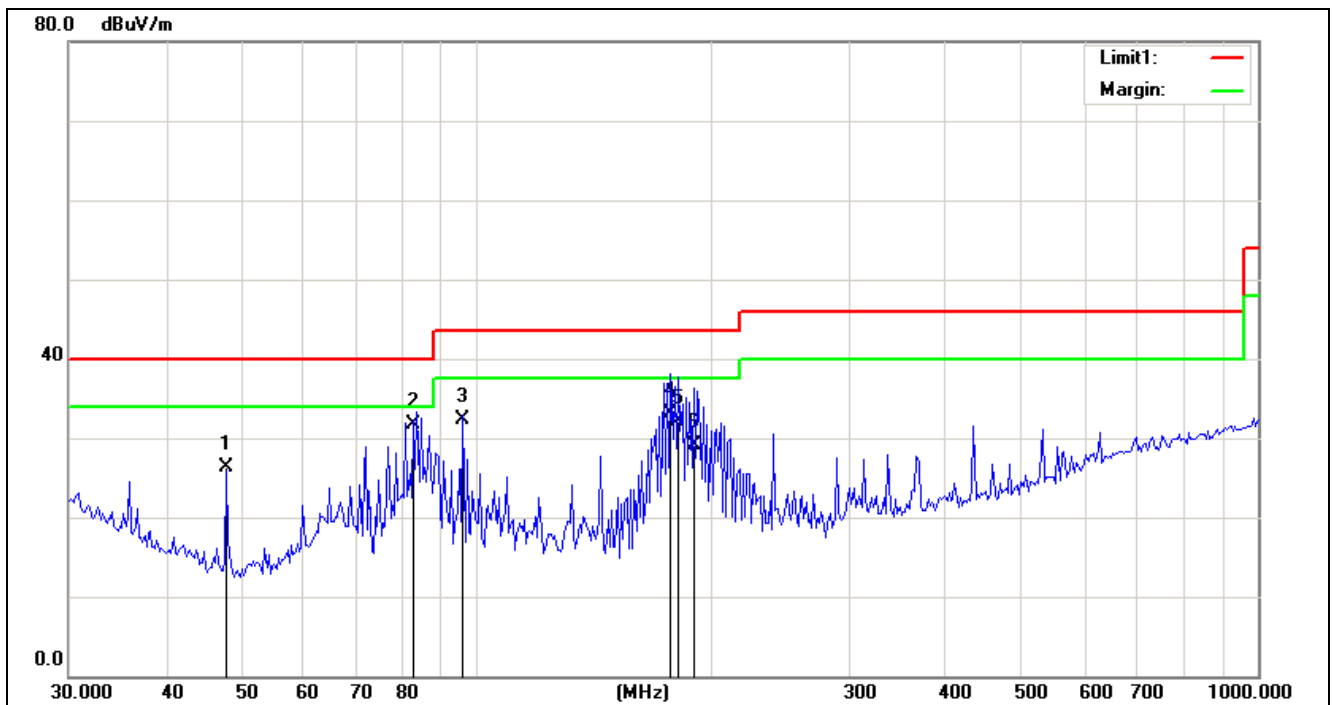


Figure 3. Above 1GHz radiated emissions test configuration

## 6.4 TEST RESULTS

<b>Project No.:</b>	<b>ZJ00043531-1</b>	<b>Polarization:</b>	<b>Vertical</b>
<b>Standard:</b>	<b>(RE)FCC PART 15 class B 3m</b>	<b>Power Source:</b>	<b>AC 120V/60Hz</b>
<b>Test item:</b>	<b>Radiation Test</b>	<b>Date:</b>	<b>2014-5-9</b>
<b>Temp./Hum.(%RH):</b>	<b>21/56%RH</b>	<b>Time:</b>	<b>10:38:01</b>
<b>EUT:</b>	<b>ERI</b>	<b>Distance:</b>	<b>3m</b>
<b>Model:</b>	<b>DC-WT-01</b>	<b>Test Result:</b>	<b>Pass</b>
<b>Note:</b>	<b>2402</b>		



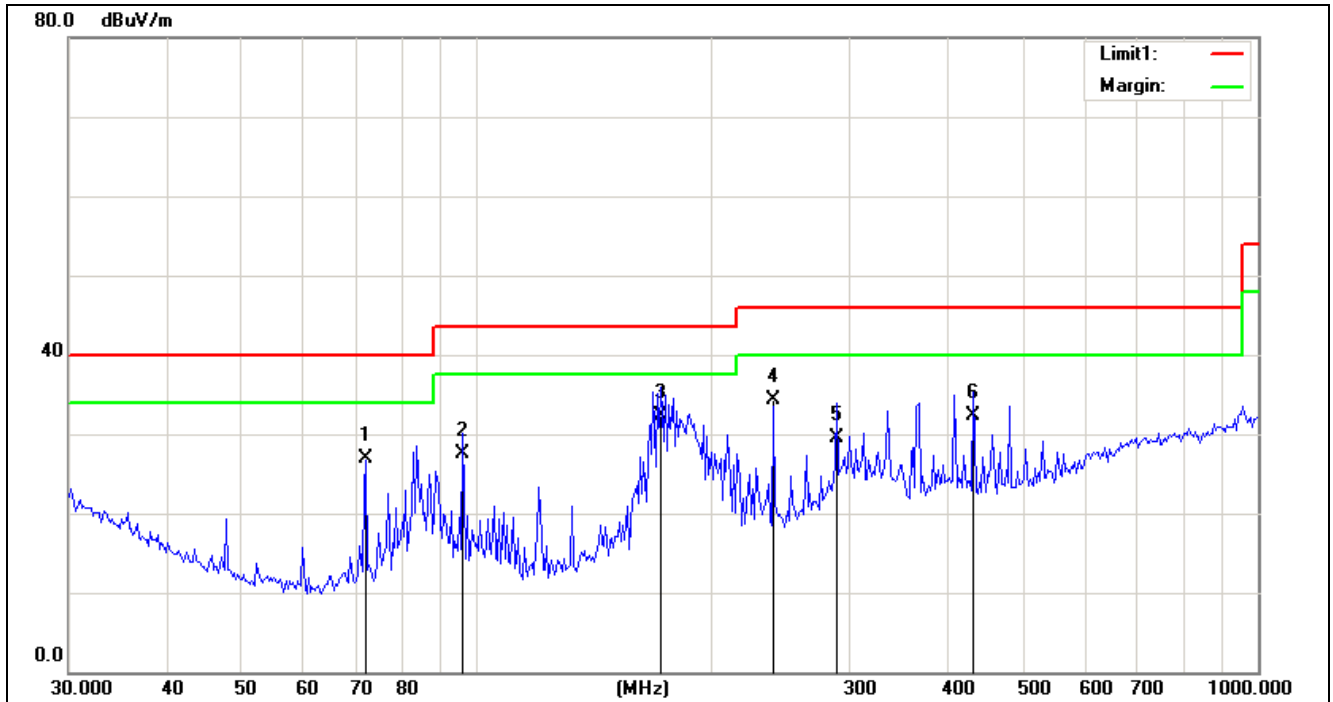
No.	Frequency (MHz)	Reading (dBuV/m)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	47.8282	15.88	10.52	26.40	40.00	-13.60	QP
2	82.9571	22.92	8.88	31.80	40.00	-8.20	QP
3	96.0079	22.54	9.86	32.40	43.50	-11.10	QP
4	177.1425	22.20	10.90	33.10	43.50	-10.40	QP
5	181.1693	21.09	11.11	32.20	43.50	-11.30	QP
6	189.4997	17.65	11.45	29.10	43.50	-14.40	QP

Emission above 1GHz:

No.	Frequency (MHz)	Reading (dBuV/m)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2113.306	29.43	4.26	33.69	74.00	-40.31	peak
2	2113.306	15.84	4.26	20.10	54.00	-33.90	AVG
3	2932.117	29.81	10.82	40.63	74.00	-33.37	peak
4	2932.117	18.08	10.82	28.90	54.00	-25.10	AVG
5	7781.565	30.31	22.49	52.80	74.00	-21.20	peak
6	7781.565	18.31	22.49	40.80	54.00	-13.20	AVG
7	9203.824	29.09	24.48	53.57	74.00	-20.43	peak
8	9203.824	17.32	24.48	41.80	54.00	-12.20	AVG
9	14644.740	26.90	28.21	55.11	74.00	-18.89	peak
10	14644.740	14.79	28.21	43.00	54.00	-11.00	AVG
11	16851.407	27.06	29.56	56.62	74.00	-17.38	peak
12	16851.407	15.84	29.56	45.40	54.00	-8.60	AVG



<b>Project No.:</b>	<b>ZJ00043531-1</b>	<b>Polarization:</b>	<b>Horizontal</b>
<b>Standard:</b>	<b>(RE)FCC PART 15 class B 3m</b>	<b>Power Source:</b>	<b>AC 120V/60Hz</b>
<b>Test item:</b>	<b>Radiation Test</b>	<b>Date:</b>	<b>2014-5-9</b>
<b>Temp./Hum.(%RH):</b>	<b>21.1/56%RH</b>	<b>Time:</b>	<b>10:44:15</b>
<b>EUT:</b>	<b>ERI</b>	<b>Distance:</b>	<b>3m</b>
<b>Model:</b>	<b>DC-WT-01</b>	<b>Test Result:</b>	<b>Pass</b>
<b>Note:</b>	<b>2402</b>		

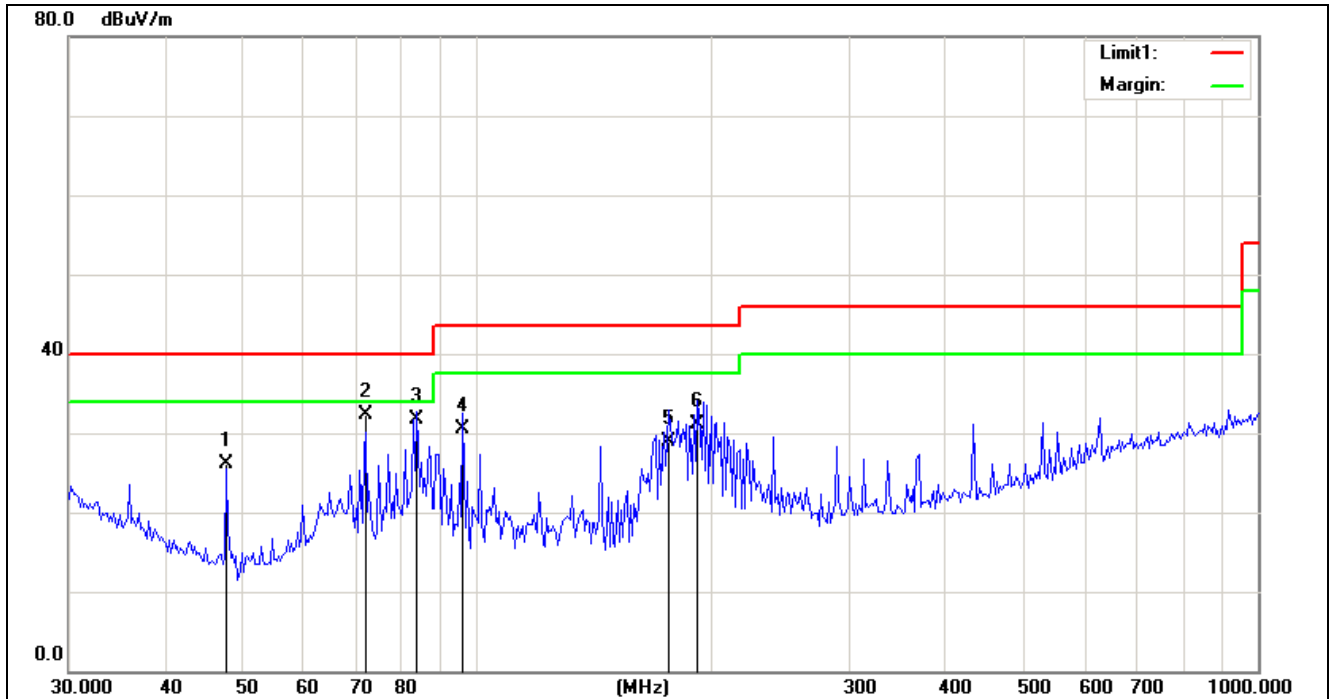


No.	Frequency (MHz)	Reading (dBuV/m)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	72.0843	19.17	7.83	27.00	40.00	-13.00	QP
2	96.0079	17.64	9.86	27.50	43.50	-16.00	QP
3	172.2345	21.77	10.63	32.40	43.50	-11.10	QP
4	239.9442	21.02	13.28	34.30	46.00	-11.70	QP
5	288.8332	14.89	14.71	29.60	46.00	-16.40	QP
6	432.8764	13.78	18.52	32.30	46.00	-13.70	QP

## Emission above 1GHz:

No.	Frequency (MHz)	Reading (dBuV/m)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2319.995	29.91	5.00	34.91	74.00	-39.09	peak
2	2319.995	17.70	5.00	22.70	54.00	-31.30	AVG
3	2932.117	30.44	10.82	41.26	74.00	-32.74	peak
4	2932.117	18.68	10.82	29.50	54.00	-24.50	AVG
5	7917.872	29.34	22.98	52.32	74.00	-21.68	peak
6	7917.872	17.22	22.98	40.20	54.00	-13.80	AVG
7	9133.064	28.94	24.39	53.33	74.00	-20.67	peak
8	9133.064	17.21	24.39	41.60	54.00	-12.40	AVG
9	14783.341	28.42	28.15	56.57	74.00	-17.43	peak
10	14783.341	16.95	28.15	45.10	54.00	-8.90	AVG
11	16397.307	28.95	28.74	57.69	74.00	-16.31	peak
12	16397.307	17.16	28.74	45.90	54.00	-8.10	AVG

<b>Project No.:</b>	<b>ZJ00043531-1</b>	<b>Polarization:</b>	<b>Vertical</b>
<b>Standard:</b>	<b>(RE)FCC PART 15 class B 3m</b>	<b>Power Source:</b>	<b>AC 120V/60Hz</b>
<b>Test item:</b>	<b>Radiation Test</b>	<b>Date:</b>	<b>2014-5-9</b>
<b>Temp./Hum.(%RH):</b>	<b>21.1/56%RH</b>	<b>Time:</b>	<b>10:49:46</b>
<b>EUT:</b>	<b>ERI</b>	<b>Distance:</b>	<b>3m</b>
<b>Model:</b>	<b>DC-WT-01</b>	<b>Test Result:</b>	<b>Pass</b>
<b>Note:</b>	<b>2440</b>		

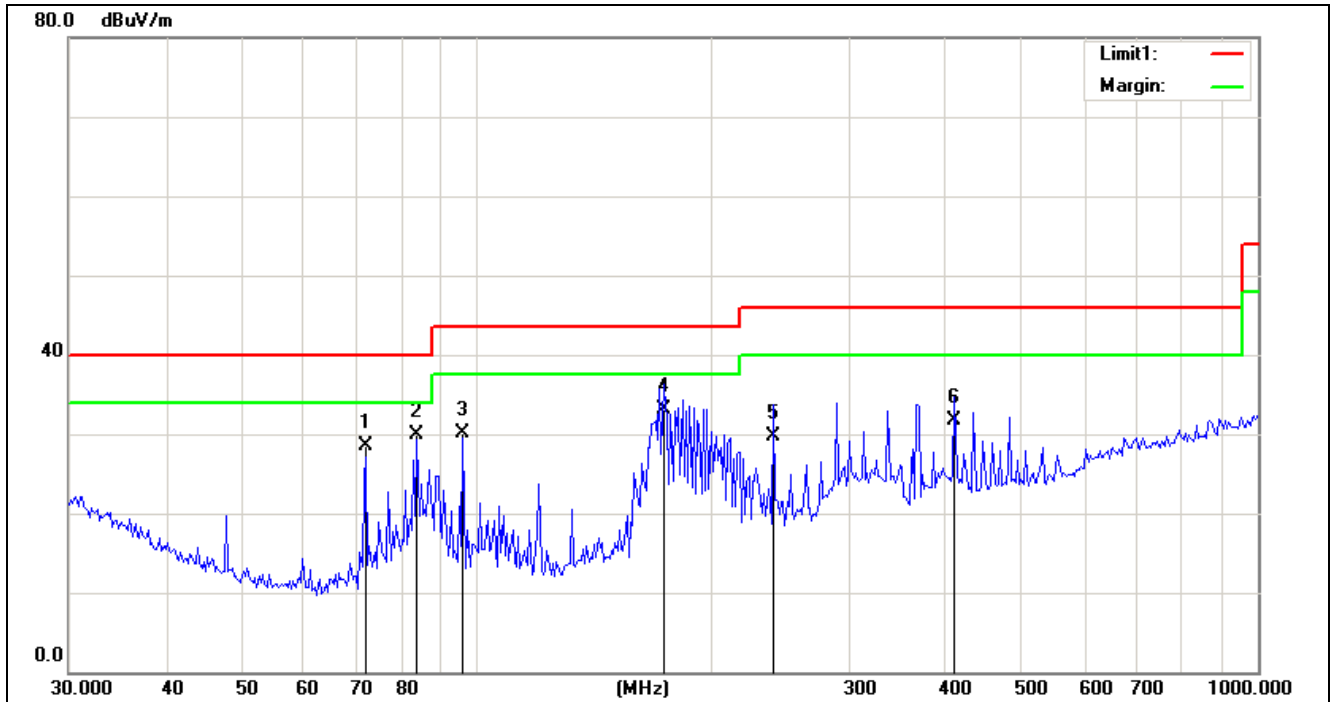


No.	Frequency (MHz)	Reading (dBuV/m)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	47.8282	15.58	10.52	26.10	40.00	-13.90	QP
2	72.0843	24.47	7.83	32.30	40.00	-7.70	QP
3	83.8947	22.72	8.98	31.70	40.00	-8.30	QP
4	96.0079	20.64	9.86	30.50	43.50	-13.00	QP
5	176.1498	18.06	10.84	28.90	43.50	-14.60	QP
6	191.6416	19.65	11.45	31.10	43.50	-12.40	QP

## Emission above 1GHz:

No.	Frequency (MHz)	Reading (dBuV/m)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2158.429	29.00	4.42	33.42	74.00	-40.58	peak
2	2158.429	16.78	4.42	21.20	54.00	-32.80	AVG
3	2984.196	29.60	11.45	41.05	74.00	-32.95	peak
4	2984.196	17.05	11.45	28.50	54.00	-25.50	AVG
5	8503.789	27.61	24.23	51.84	74.00	-22.16	peak
6	8503.789	15.37	24.23	39.60	54.00	-14.40	AVG
7	9010.541	28.79	24.22	53.01	74.00	-20.99	peak
8	9010.541	15.88	24.22	40.10	54.00	-13.90	AVG
9	14384.970	27.59	28.17	55.76	74.00	-18.24	peak
10	14384.970	14.63	28.17	42.80	54.00	-11.20	AVG
11	16335.641	27.91	28.78	56.69	74.00	-17.31	peak
12	16335.641	16.52	28.78	45.30	54.00	-8.70	AVG

<b>Project No.:</b>	<b>ZJ00043531-1</b>	<b>Polarization:</b>	<b>Horizontal</b>
<b>Standard:</b>	<b>(RE)FCC PART 15 class B 3m</b>	<b>Power Source:</b>	<b>AC 120V/60Hz</b>
<b>Test item:</b>	<b>Radiation Test</b>	<b>Date:</b>	<b>2014-5-9</b>
<b>Temp./Hum.(%RH):</b>	<b>21.1/56%RH</b>	<b>Time:</b>	<b>10:51:25</b>
<b>EUT:</b>	<b>ERI</b>	<b>Distance:</b>	<b>3m</b>
<b>Model:</b>	<b>DC-WT-01</b>	<b>Test Result:</b>	<b>Pass</b>
<b>Note:</b>	<b>2440</b>		

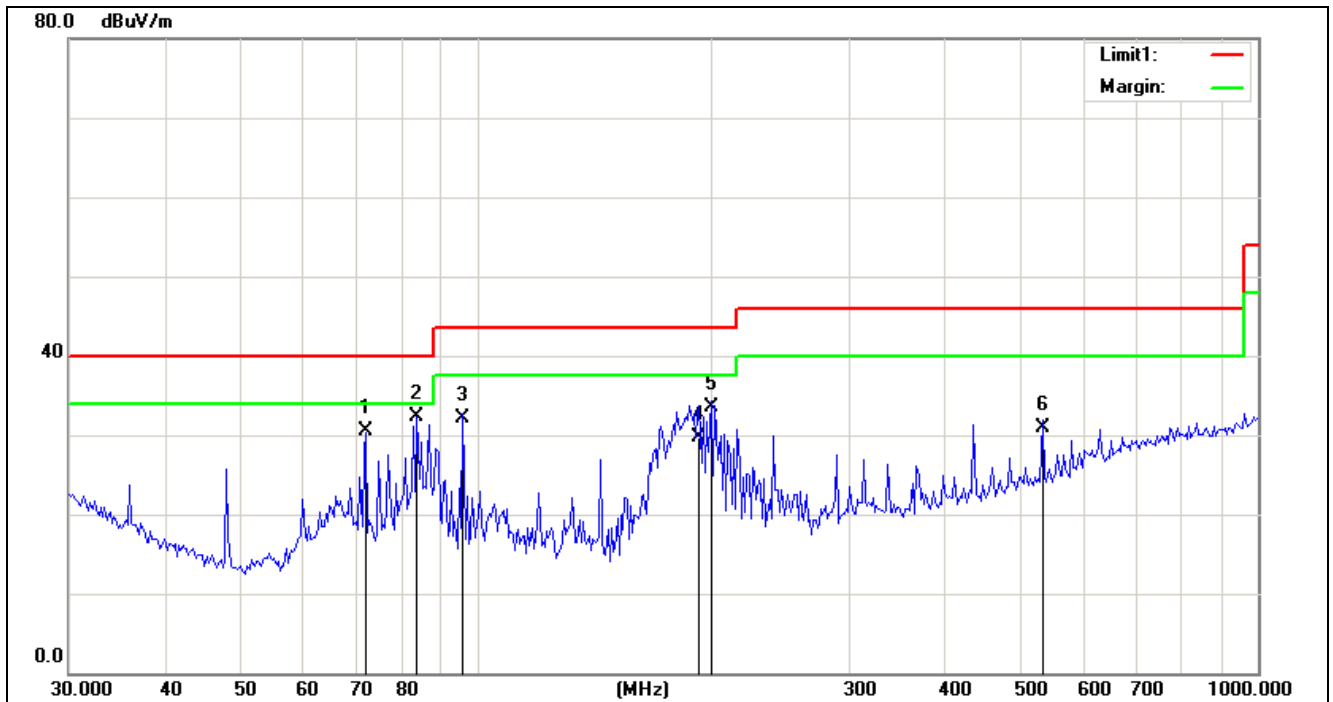


No.	Frequency (MHz)	Reading (dBuV/m)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	72.0843	20.77	7.83	28.60	40.00	-11.40	QP
2	83.8947	20.92	8.98	29.90	40.00	-10.10	QP
3	96.0079	20.34	9.86	30.20	43.50	-13.30	QP
4	173.2051	22.52	10.68	33.20	43.50	-10.30	QP
5	239.9442	16.52	13.28	29.80	46.00	-16.20	QP
6	409.2218	13.45	18.25	31.70	46.00	-14.30	QP

Emission above 1GHz:

No.	Frequency (MHz)	Reading (dBuV/m)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2251.586	29.79	4.76	34.55	74.00	-39.45	peak
2	2251.586	17.54	4.76	22.30	54.00	-31.70	AVG
3	2989.455	29.67	11.52	41.19	74.00	-32.81	peak
4	2989.455	18.18	11.52	29.70	54.00	-24.30	AVG
5	7781.565	30.30	22.49	52.79	74.00	-21.21	peak
6	7781.565	17.81	22.49	40.30	54.00	-13.70	AVG
7	9080.352	28.88	24.32	53.20	74.00	-20.80	peak
8	9080.352	17.38	24.32	41.70	54.00	-12.30	AVG
9	13774.974	27.14	27.43	54.57	74.00	-19.43	peak
10	13774.974	16.37	27.43	43.80	54.00	-10.20	AVG
11	14923.252	27.65	28.09	55.74	74.00	-18.26	peak
12	14923.252	16.11	28.09	44.20	54.00	-9.80	AVG

<b>Project No.:</b>	<b>ZJ00043531-1</b>	<b>Polarization:</b>	<b>Vertical</b>
<b>Standard:</b>	<b>(RE)FCC PART 15 class B 3m</b>	<b>Power Source:</b>	<b>AC 120V/60Hz</b>
<b>Test item:</b>	<b>Radiation Test</b>	<b>Date:</b>	<b>2014-5-9</b>
<b>Temp./Hum.(%RH):</b>	<b>21.1/56%RH</b>	<b>Time:</b>	<b>10:54:36</b>
<b>EUT:</b>	<b>ERI</b>	<b>Distance:</b>	<b>3m</b>
<b>Model:</b>	<b>DC-WT-01</b>	<b>Test Result:</b>	<b>Pass</b>
<b>Note:</b>	<b>2480</b>		

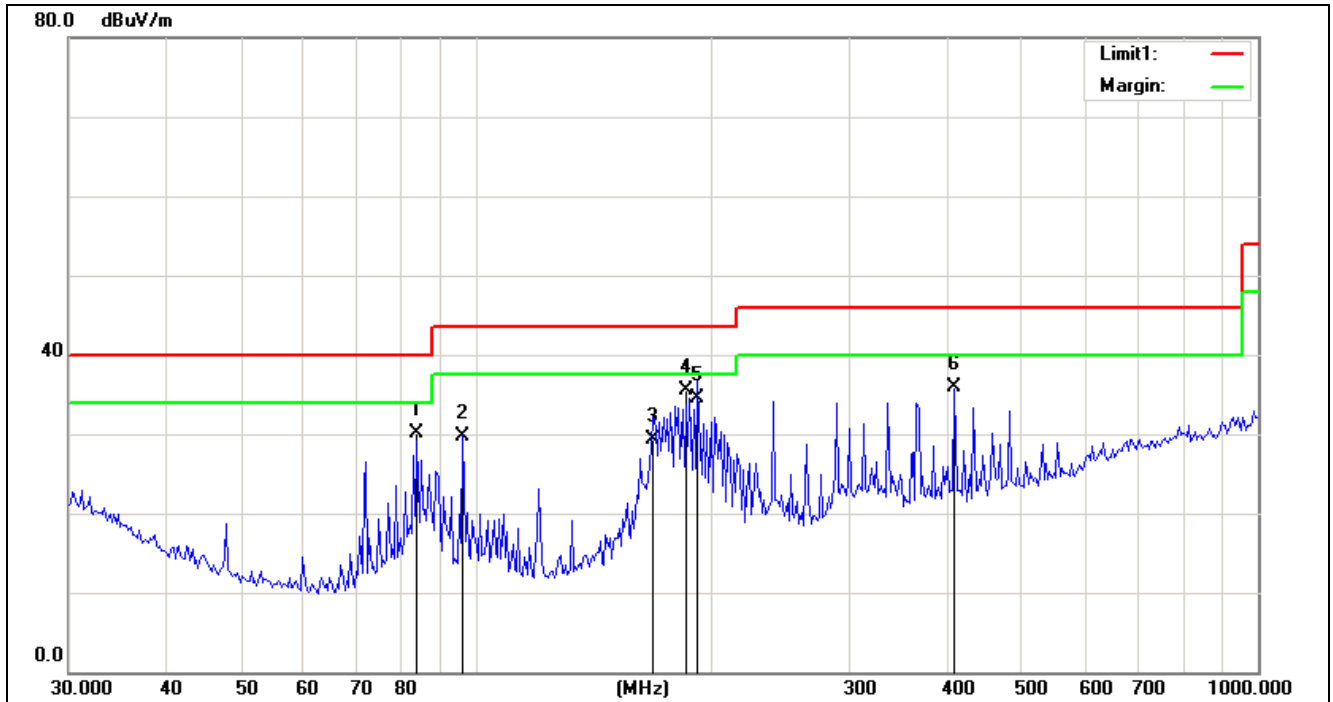


No.	Frequency (MHz)	Reading (dBuV/m)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	72.0843	22.67	7.83	30.50	40.00	-9.50	QP
2	83.8947	23.42	8.98	32.40	40.00	-7.60	QP
3	96.0079	22.34	9.86	32.20	43.50	-11.30	QP
4	192.7216	18.26	11.44	29.70	43.50	-13.80	QP
5	199.3303	22.11	11.39	33.50	43.50	-10.00	QP
6	529.9346	10.21	20.79	31.00	46.00	-15.00	QP

## Emission above 1GHz:

No.	Frequency (MHz)	Reading (dBuV/m)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2247.626	28.41	4.73	33.14	74.00	-40.86	peak
2	2247.626	16.17	4.73	20.90	54.00	-33.10	AVG
3	2727.922	31.32	8.26	39.58	74.00	-34.42	peak
4	2727.922	18.14	8.26	26.40	54.00	-27.60	AVG
5	5781.268	29.45	17.15	46.60	74.00	-27.40	peak
6	5781.268	15.15	17.15	32.30	54.00	-21.70	AVG
7	7902.609	28.45	22.92	51.37	74.00	-22.63	peak
8	7902.609	15.88	22.92	38.80	54.00	-15.20	AVG
9	16397.307	28.68	28.74	57.42	74.00	-16.58	peak
10	16397.307	17.36	28.74	46.10	54.00	-7.90	AVG
11	17764.183	26.69	29.14	55.83	74.00	-18.17	peak
12	17764.183	15.56	29.14	44.70	54.00	-9.30	AVG

<b>Project No.:</b>	<b>ZJ00043531-1</b>	<b>Polarization:</b>	<b>Horizontal</b>
<b>Standard:</b>	<b>(RE)FCC PART 15 class B 3m</b>	<b>Power Source:</b>	<b>AC 120V/60Hz</b>
<b>Test item:</b>	<b>Radiation Test</b>	<b>Date:</b>	<b>2014-5-9</b>
<b>Temp./Hum.(%RH):</b>	<b>21.1/56%RH</b>	<b>Time:</b>	<b>11:02:59</b>
<b>EUT:</b>	<b>ERI</b>	<b>Distance:</b>	<b>3m</b>
<b>Model:</b>	<b>DC-WT-01</b>	<b>Test Result:</b>	<b>Pass</b>
<b>Note:</b>	<b>2480</b>		



No.	Frequency (MHz)	Reading (dBuV/m)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	83.8947	21.22	8.98	30.20	40.00	-9.80	QP
2	96.0079	19.94	9.86	29.80	43.50	-13.70	QP
3	168.4062	18.76	10.54	29.30	43.50	-14.20	QP
4	185.2878	24.31	11.29	35.60	43.50	-7.90	QP
5	191.6416	23.05	11.45	34.50	43.50	-9.00	QP
6	409.2218	17.75	18.25	36.00	46.00	-10.00	QP

Emission above 1GHz:

No.	Frequency (MHz)	Reading (dBuV/m)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2113.306	28.74	4.26	33.00	74.00	-41.00	peak
2	2113.306	16.54	4.26	20.80	54.00	-33.20	AVG
3	2886.022	30.11	10.26	40.37	74.00	-33.63	peak
4	2886.022	17.34	10.26	27.60	54.00	-26.40	AVG
5	7917.872	27.96	22.98	50.94	74.00	-23.06	peak
6	7917.872	15.52	22.98	38.50	54.00	-15.50	AVG
7	9010.541	28.57	24.22	52.79	74.00	-21.21	peak
8	9010.541	16.08	24.22	40.30	54.00	-13.70	AVG
9	13429.052	28.08	26.93	55.01	74.00	-18.99	peak
10	13429.052	16.97	26.93	43.90	54.00	-10.10	AVG
11	14979.587	28.12	28.07	56.19	74.00	-17.81	peak
12	14979.587	16.93	28.07	45.00	54.00	-9.00	AVG

Note: Below 30MHz, since the radiated emission of the EUT is too weak to be detected.

## 7. 6dB BANDWIDTH TESTING

### 7.1 LIMITS

Systems using digital modulation techniques may operate in the 902–928 MHz, 2400–2483.5 MHz, and 5725–5850 MHz bands. The minimum 6 dB bandwidth shall be at least 500 kHz.

### 7.2 TEST PROCEDURES

Test procedures follow ANSI C63.10:2009 and KDB 558074 D01 DTS Measurement Guidance v03r01.

1. Check the calibration of the measuring instrument using either an internal calibrator or a known signal from an external generator.
2. Position the EUT without connection to measurement instrument. Turn on the EUT and connect it to measurement instrument. Then set it to any one convenient frequency within its operating range. Set a reference level on the measuring instrument equal to the highest peak value.
3. Set resolution bandwidth (RBW) = 100kHz. Set the video bandwidth (VBW)  $\geq 3 \times$  RBW. Detector = Peak. Trace mode = max hold. Sweep = auto couple. Allow the trace to stabilize.
4. Measure the maximum width of the emission that is constrained by the frequencies associated with the two outermost amplitude points (upper and lower) that are attenuated by 6 dB relative to the maximum level measured in the fundamental emission. Compare the resultant bandwidth with the RBW setting of the analyzer.
5. Repeat above procedures until all frequencies measured were complete.

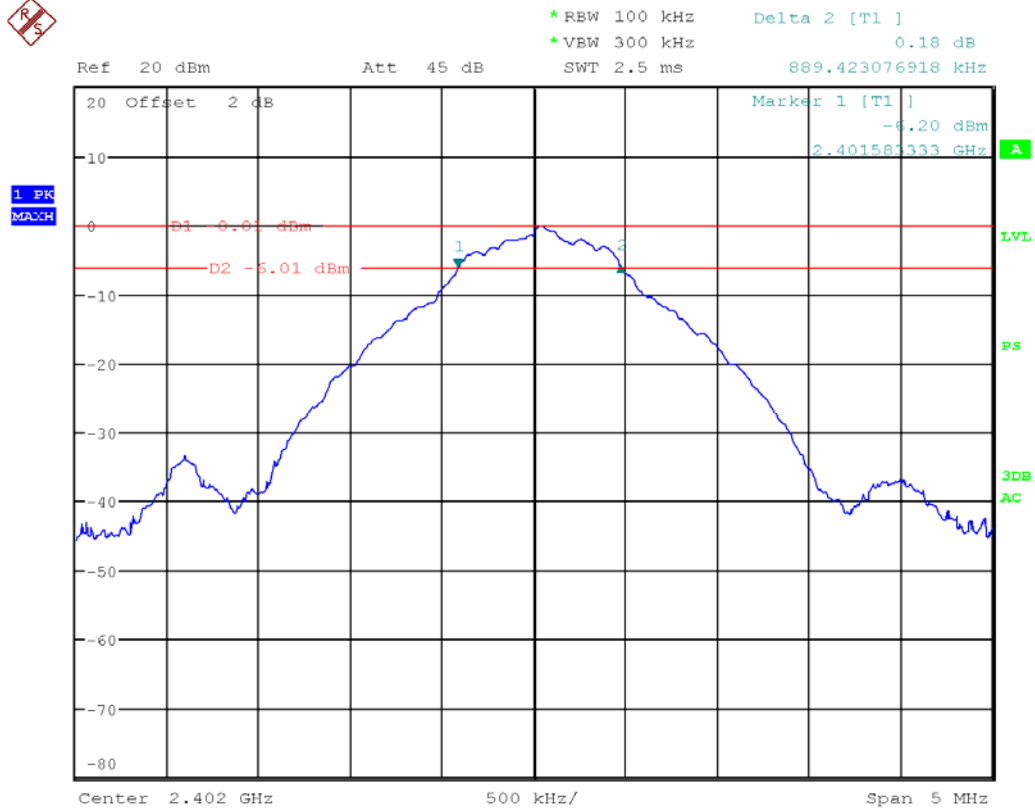
### 7.3 TEST SETUP



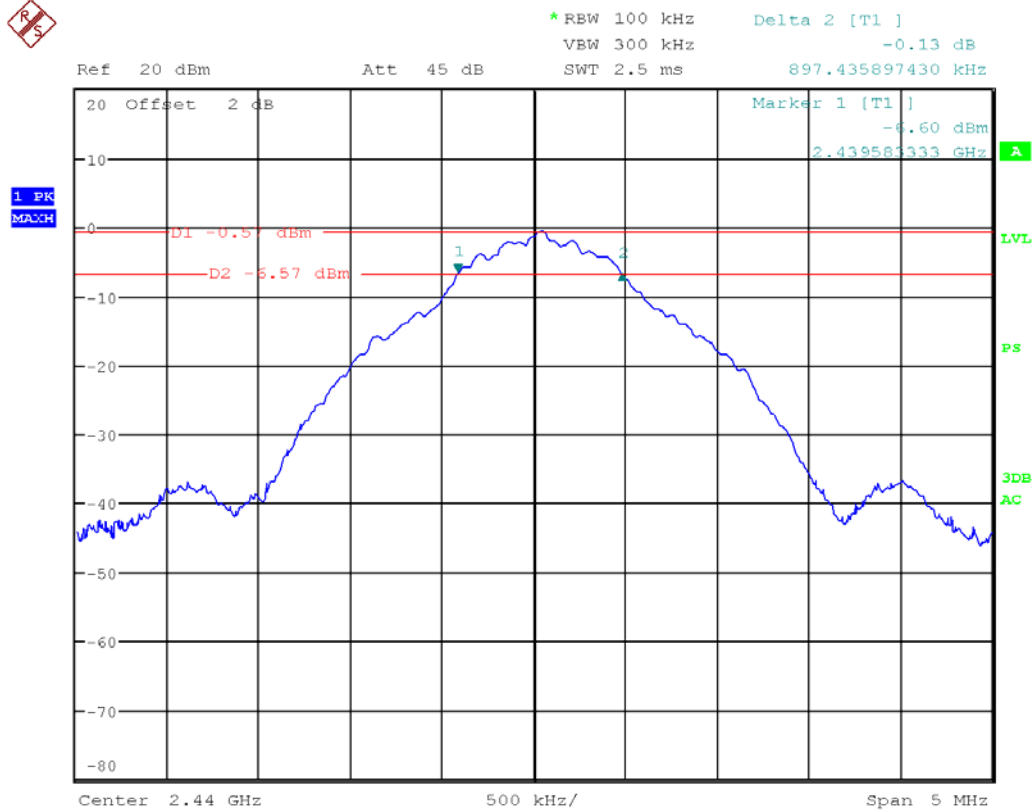
### 7.4 TEST RESULTS

Channel	Channel Frequency (MHz)	Data Rate (Mbps)	6dB Bandwidth (MHz)	Limit (kHz)
BT 4.0 GFSK Mode				
Low Channel	2402	1	0.889	> 500
Middle Channel	2440	1	0.897	> 500
High Channel	2480	1	0.897	> 500

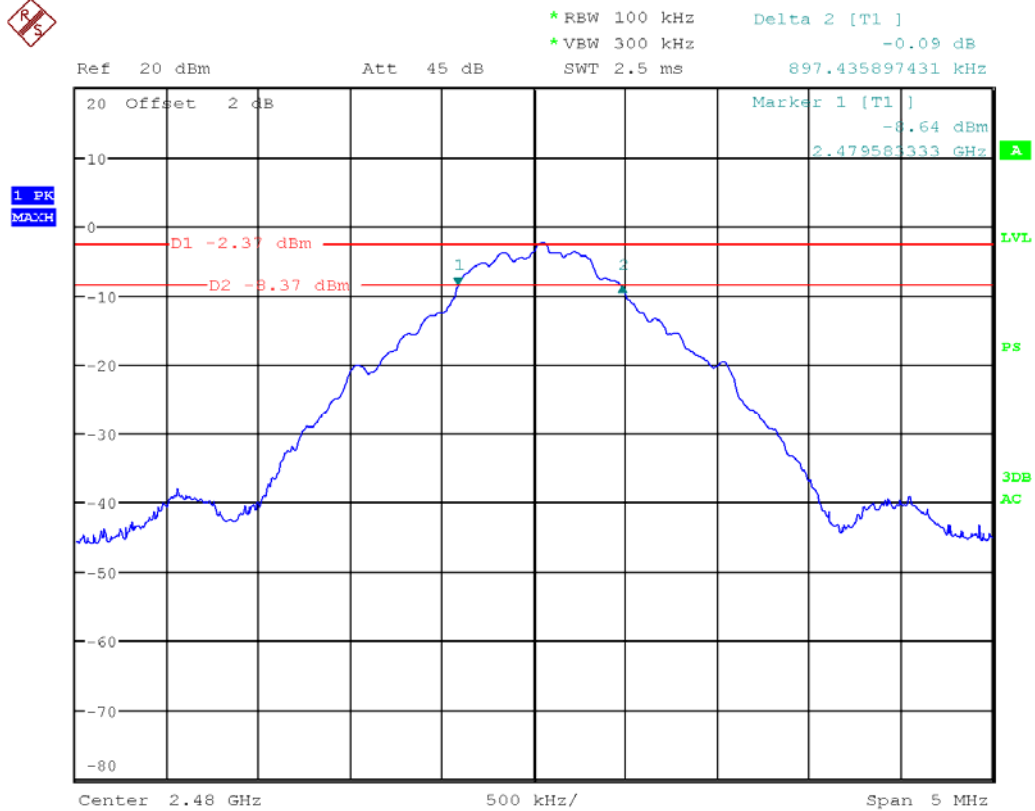
GFSK mode:  
Channel 2402MHz



Channel 2440MHz



Channel 2480MHz





## 8. MAXIMUM PEAK OUTPUT POWER

### 8.1 LIMITS

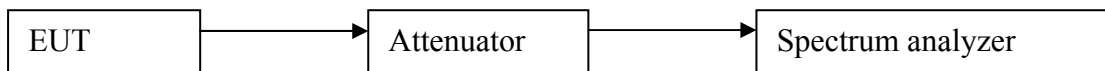
The maximum Peak output power measurement is 1W

### 8.2 TEST PROCEDURES

Test procedures follow KDB 558074 D01 DTS Measurement Guidance v03r01.

1. Place the EUT on a bench and set it in transmitting mode.
2. Remove the antenna from the EUT and then connect a low loss RF cable from the antenna port to an EMI Test Receiver.
3. The spectrum analyzer resolution bandwidth that is  $\leq$ EBW. So we test the Maximum Conducted Output Power —Integrated band power method.
4. Set the analyzer span  $\geq 1.5 \times$  DTS bandwidth. Set the RBW = 1 MHz. Set the VBW  $\geq 3$  MHz. Sweep time = auto couple. Detector = peak. Allow trace to fully stabilize.

### 8.3 TEST SETUP



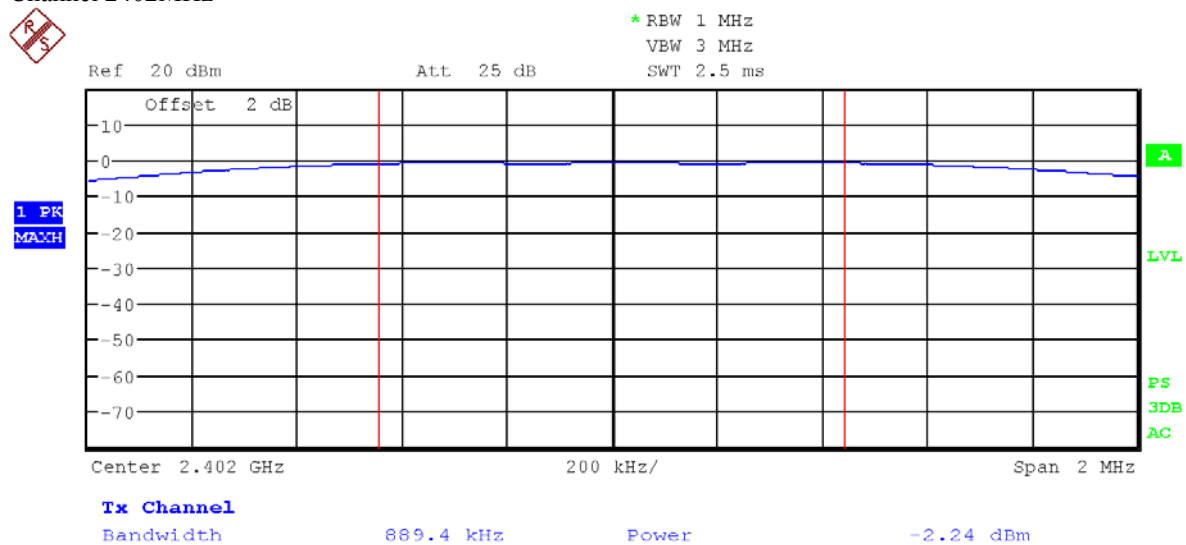
### 8.4 TEST RESULTS

BT 4.0 GFSK Mode:

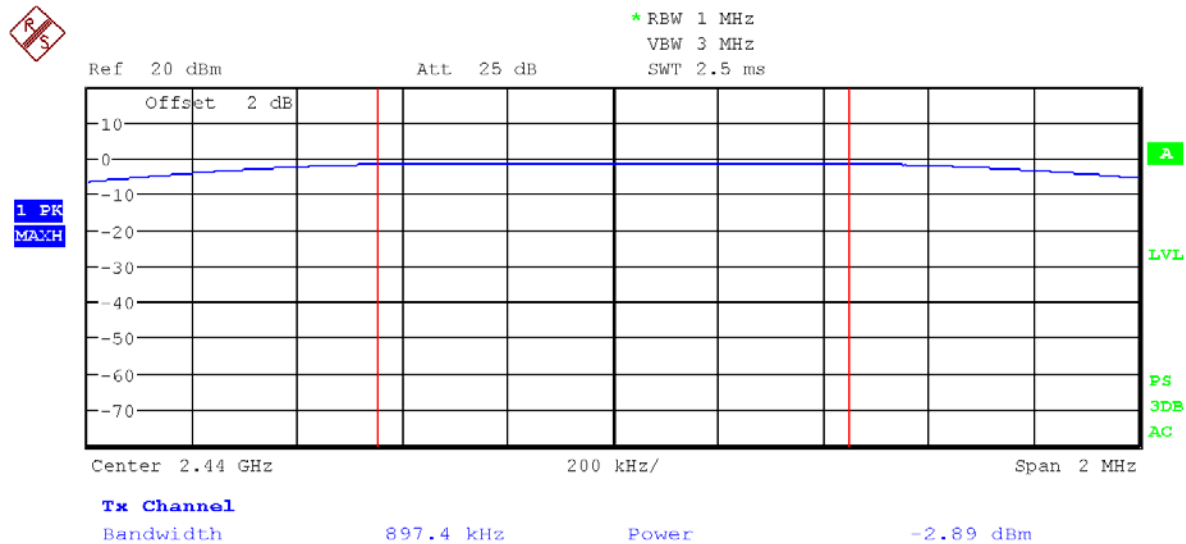
Channel No.	Frequency (MHz)	Mode	Data Rate	Measured Channel Power (dBm)	Limit	Result
1	2402	GFSK	1Mbps	-2.24	1W (30dBm)	Pass
20	2440			-2.89		Pass
40	2480			-3.24		Pass

GFSK mode: 1Mbps

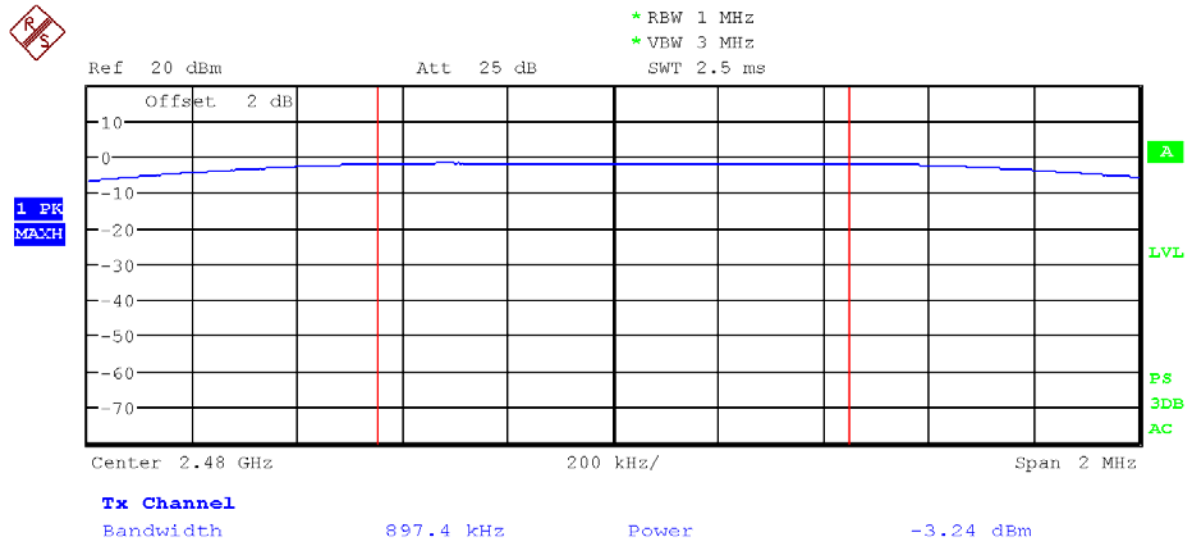
Channel 2402MHz



Channel 2440MHz



Channel 2480MHz



## 9. POWER SPECTRAL DENSITY

### 9.1 LIMITS

For digitally modulated systems, the power spectral density conducted from the intentional radiator to the antenna shall not be greater than 8 dBm in any 3 kHz band during any time interval of continuous transmission. This power spectral density shall be determined in accordance with the provisions of paragraph (b) of this section. The same method of determining the conducted output power shall be used to determine the power spectral density.

### 9.2 TEST PROCEDURES

Test procedures follow KDB 558074 D01 DTS Measurement Guidance v03r01.

1. Check the calibration of the measuring instrument using either an internal calibrator or a known signal from an external generator.
2. Position the EUT was set without connection to measurement instrument. Turn on the EUT and connect its antenna terminal to measurement instrument via a low loss cable. Then set it to any one measured frequency within its operating range, and make sure the instrument is operated in its linear range.
3. Set the analyzer span to 1.5 times the DTS bandwidth. Set the RBW = 3 kHz. Set the VBW  $\geq 3$  RBW. Detector = peak. Ensure that the number of measurement points in the sweep  $\geq 2 \times \text{span/RBW}$  (use of a greater number of measurement points than this minimum requirement is recommended).
4. Repeat above procedures until all frequencies measured were complete.

### 9.3 TEST SETUP



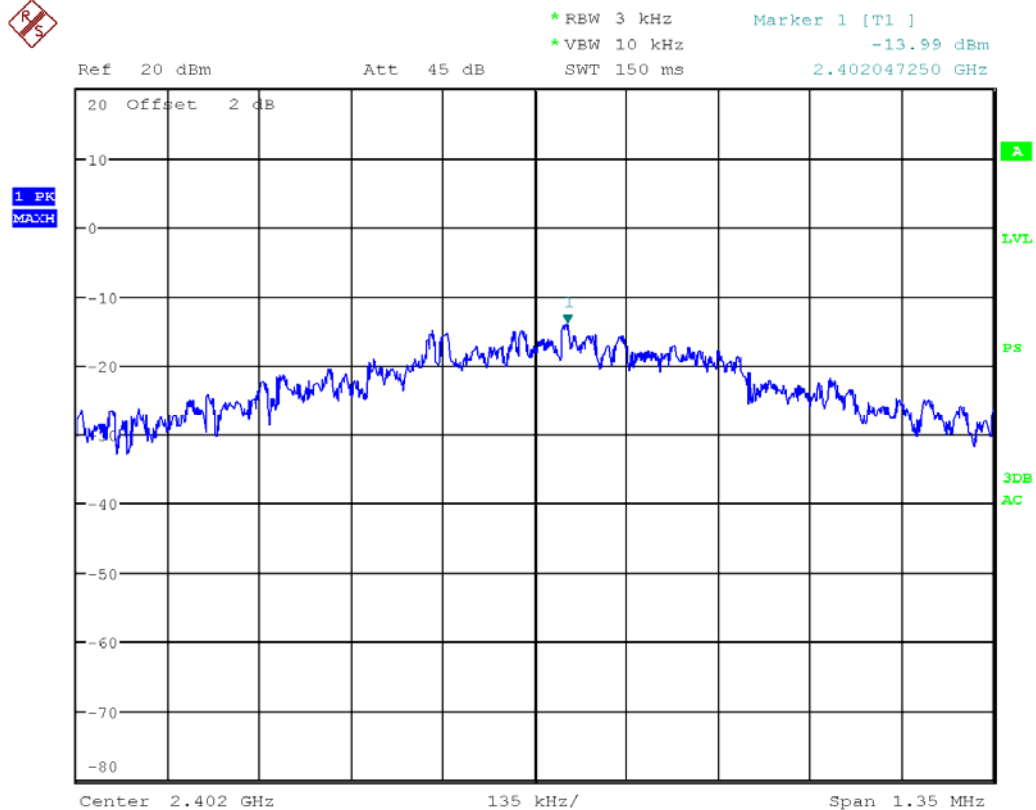
## 9.4 TEST RESULTS

802.11b mode:

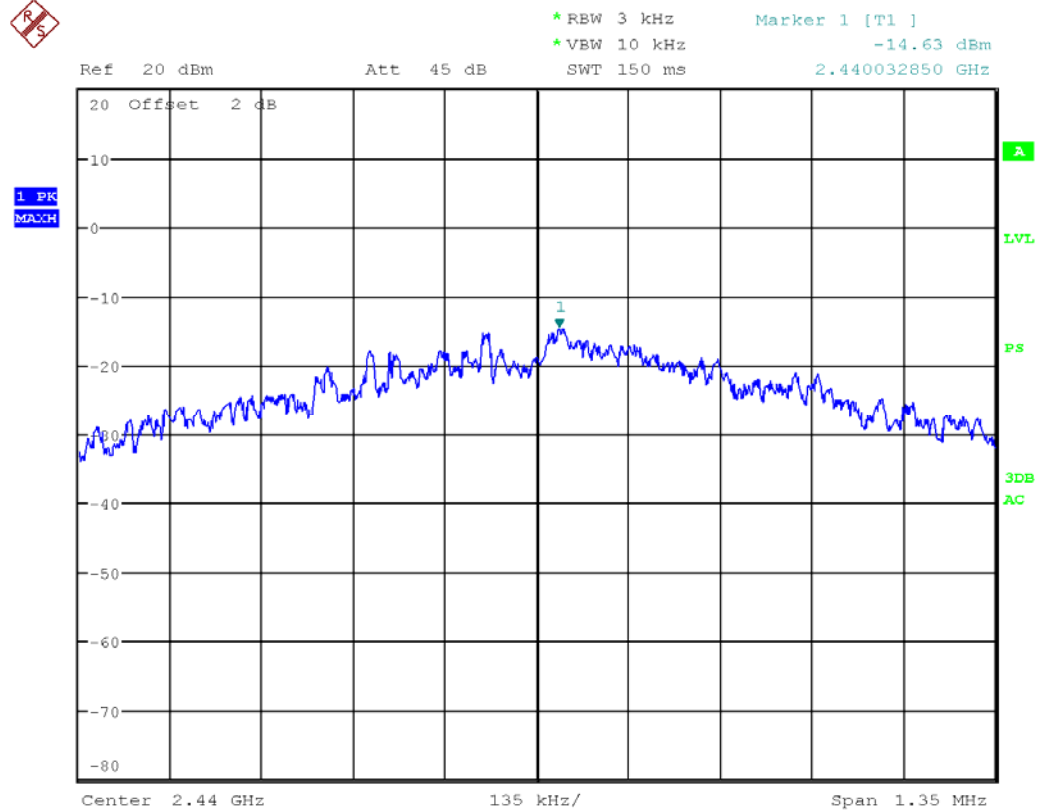
Channel No.	Frequency (MHz)	Mode	Data Rate	PSD (dBm/3KHz)	Limit	Result
1	2402	GFSK	1Mbps	-13.99	8dBm/3KHz	Pass
20	2440			-14.63		Pass
40	2480			-13.52		Pass

GFSK mode:

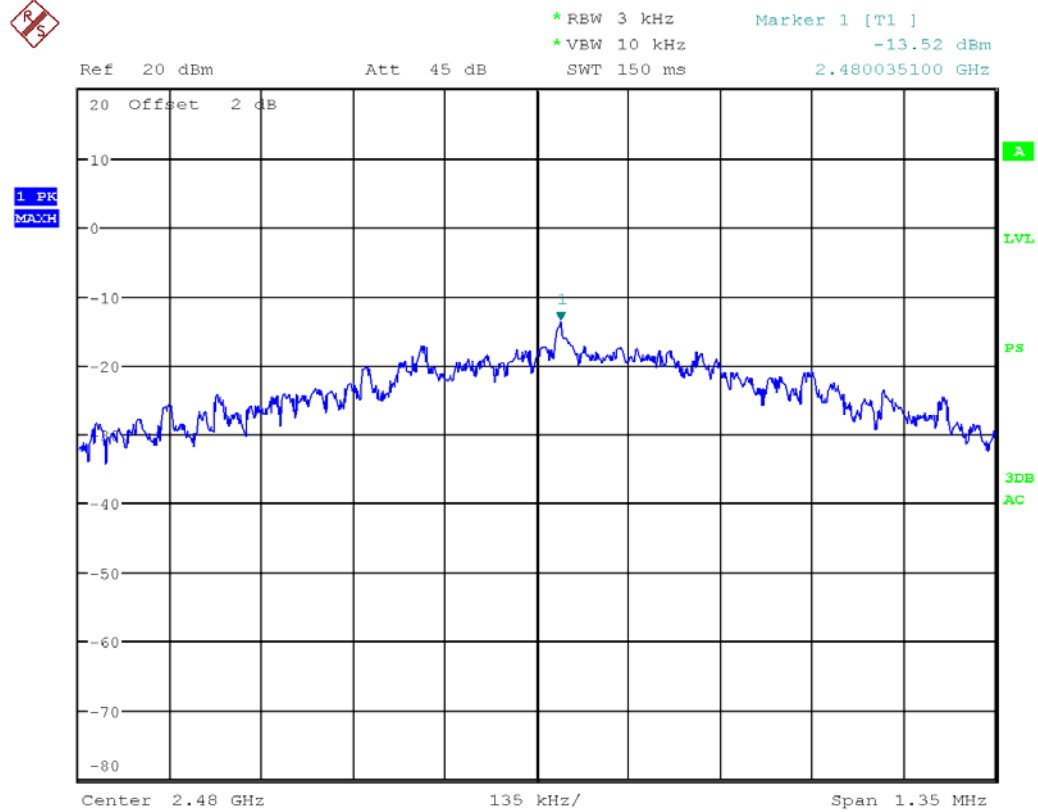
Channel 2402MHz



## Channel 2440MHz



## Channel 2480MHz



## 10. EMISSIONS IN NON-RESTRICTED FREQUENCY BANDS

### 10.1 LIMITS

FCC 15.247(d) & 15.209

### 10.2 TEST PROCEDURES

Test procedures follow KDB 558074 D01 DTS Measurement Guidance v03r01.

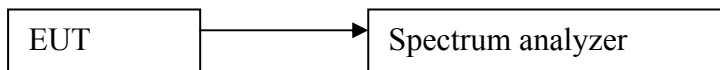
Remove the antenna from the EUT and then connect a low attenuation cable from the antenna port to the spectrum analyzer.

1. Reference level measurement

Below 1GHz Set the spectrum analyzer: RBW =100KHz VBW  $\geq 3 \times$  RBW, Set the span to  $\geq 1.5$  times the DTS bandwidth. Sweep = auto; Detector Function = peak. Trace = Max-hold. Allow the trace to stabilize.

2. Set the spectrum analyzer: RBW =100KHz VBW  $\geq 3 \times$  RBW, Set the span to  $\geq 1.5$  times the DTS bandwidth. Sweep = auto; Detector Function = peak. Trace = Max-hold. Allow the trace to stabilize.

### 10.3 TEST SETUP

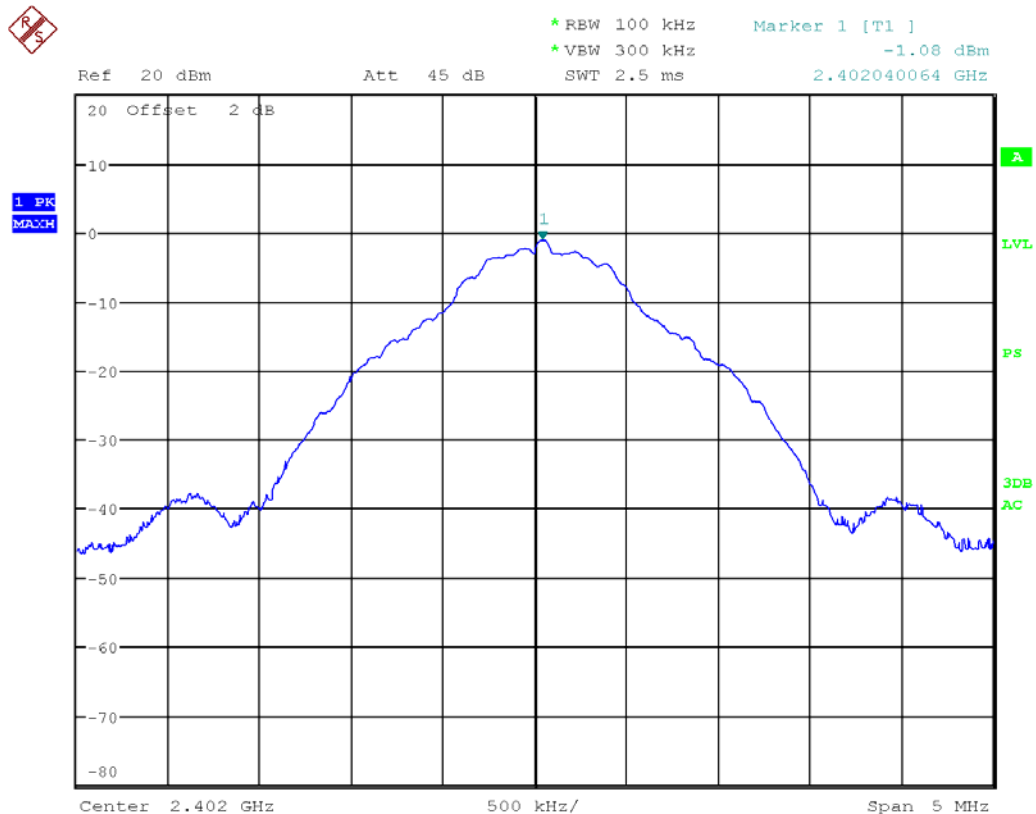


### 10.4 TEST RESULTS

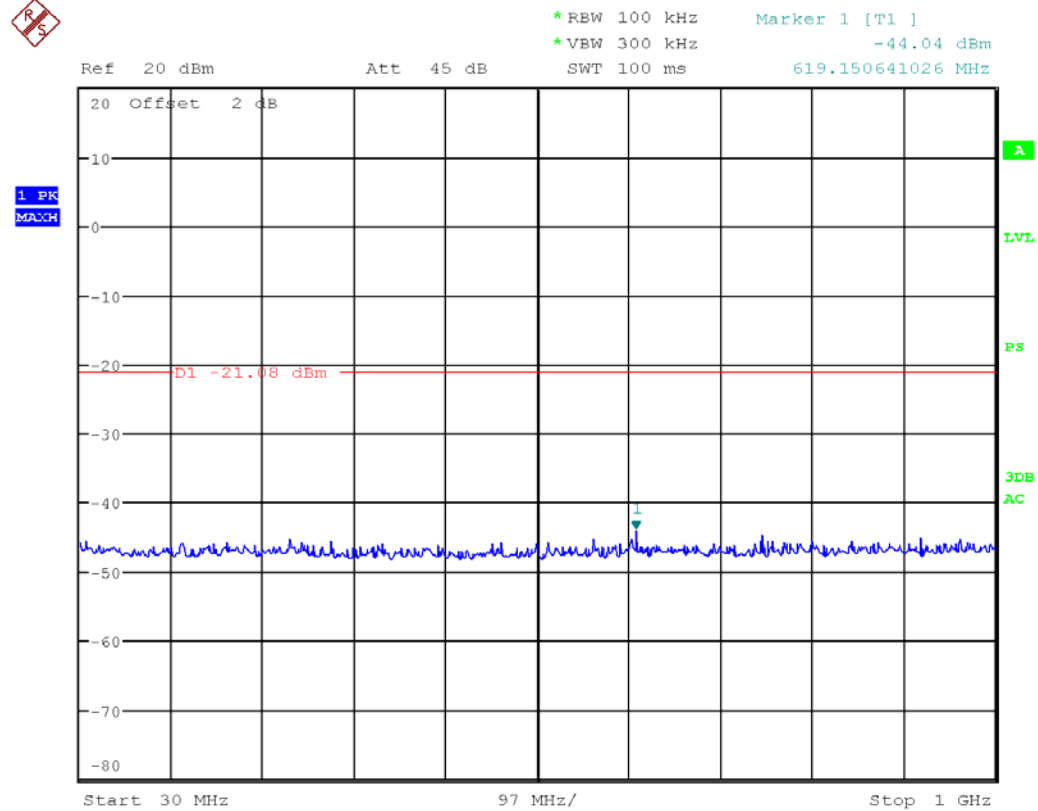
GFSK mode:

Channel 2402MHz

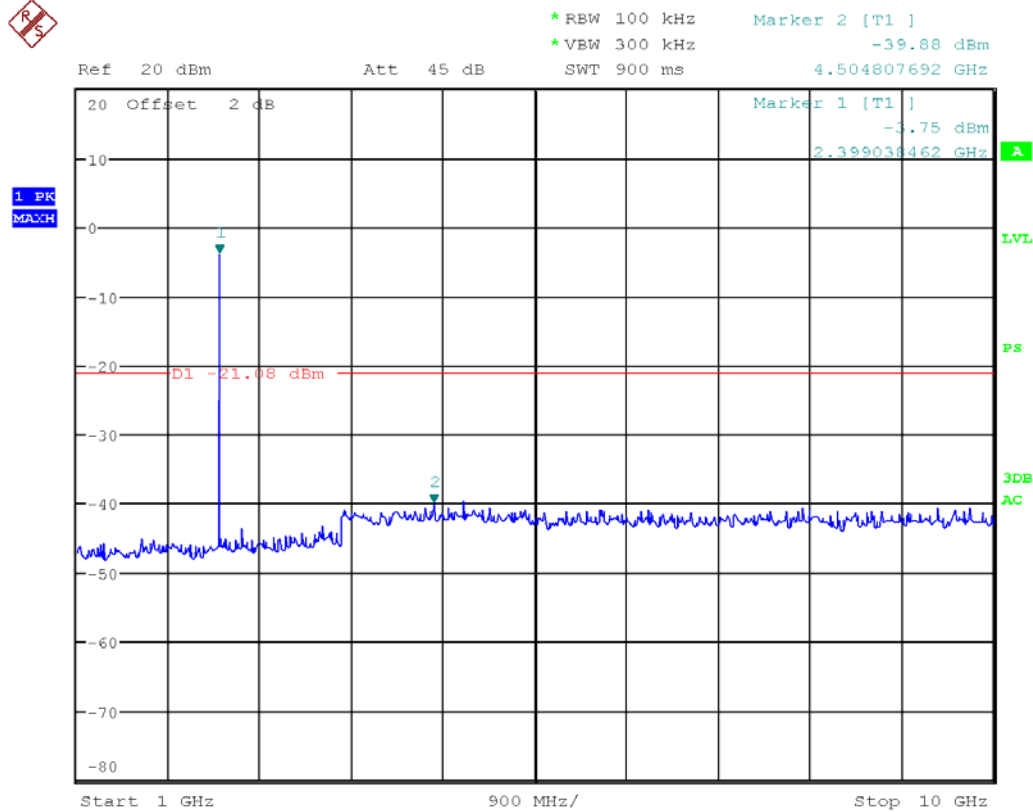
reference level:



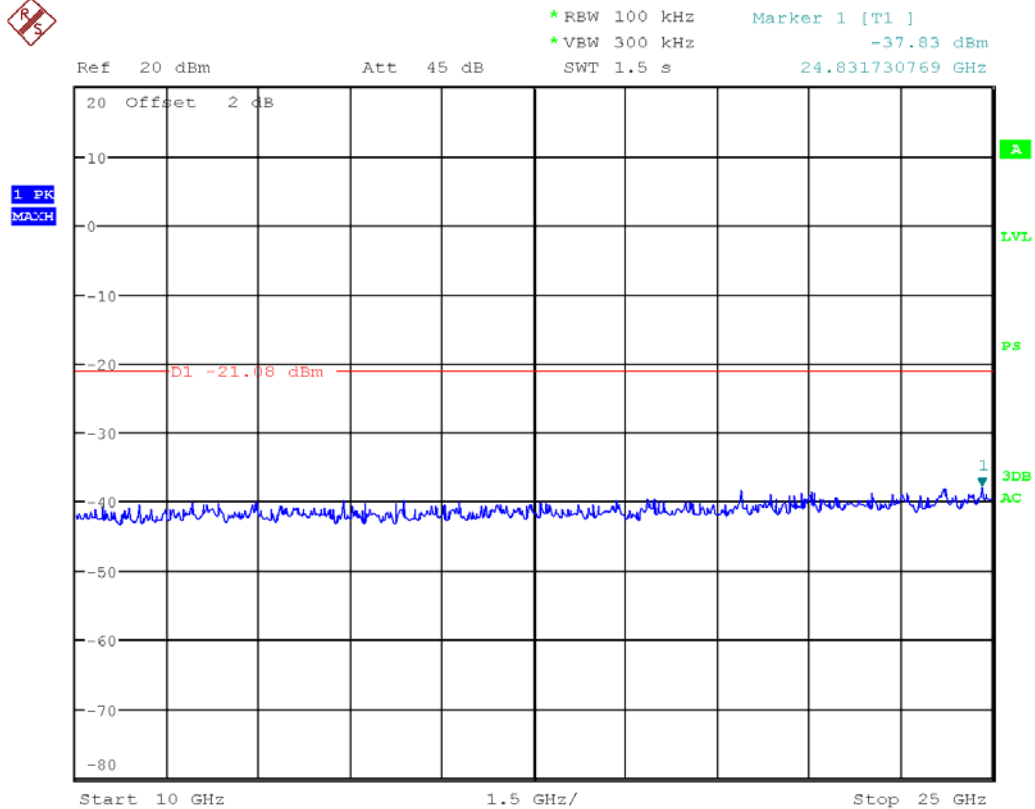
## 30M-1G



## 1G-10G



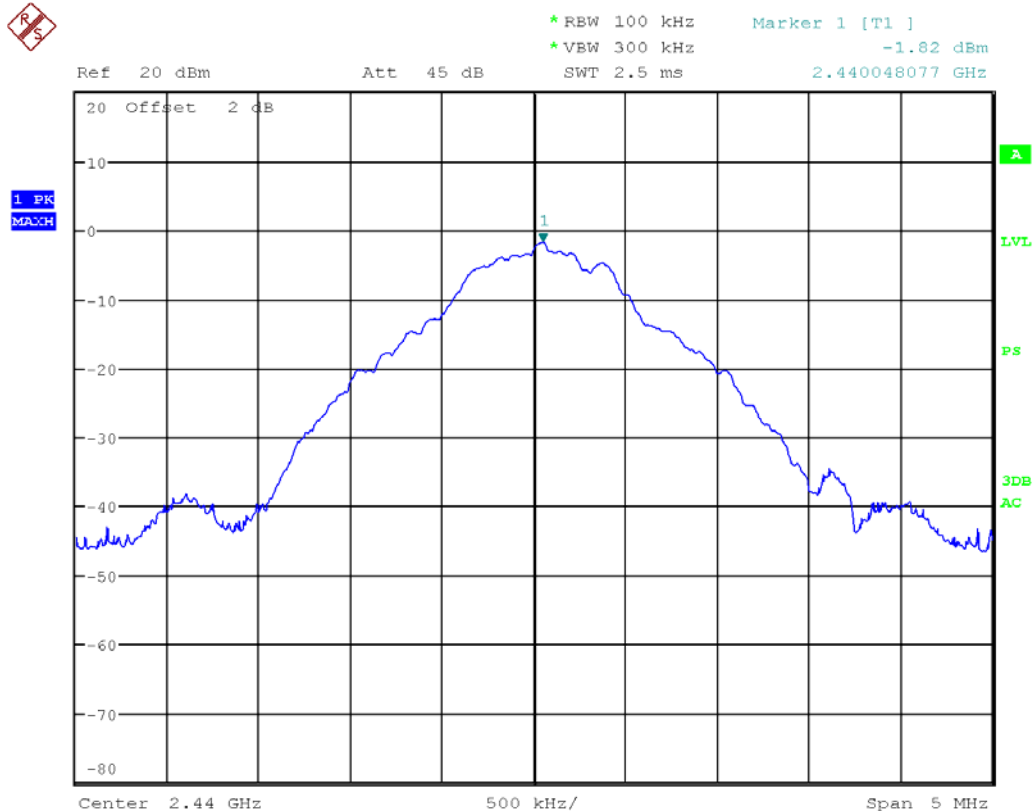
10G-25G



GFSK mode:

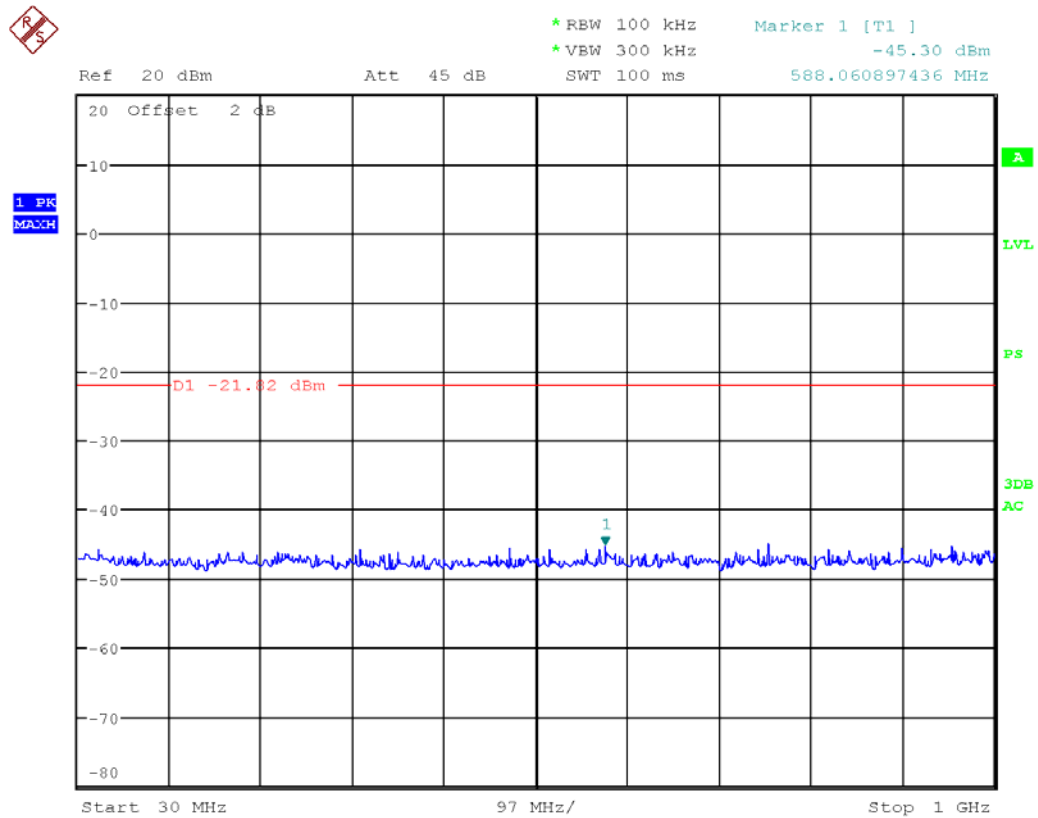
Channel 2440MHz

Reference level

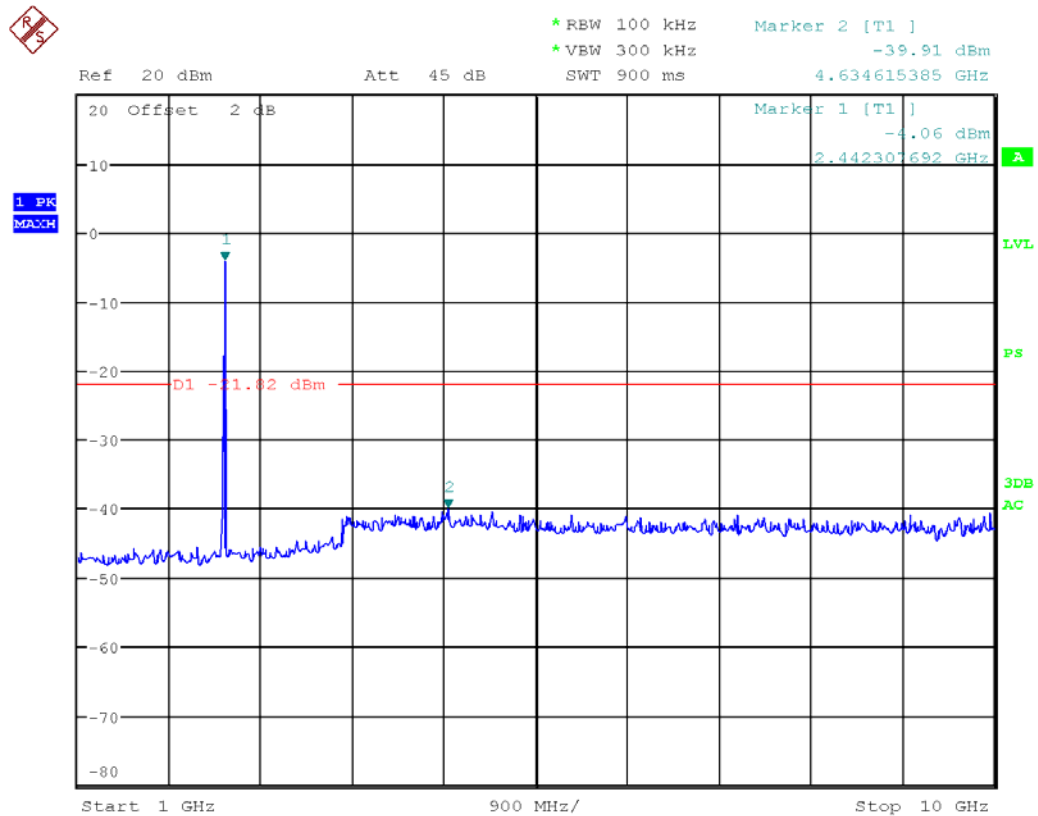


30M-1G

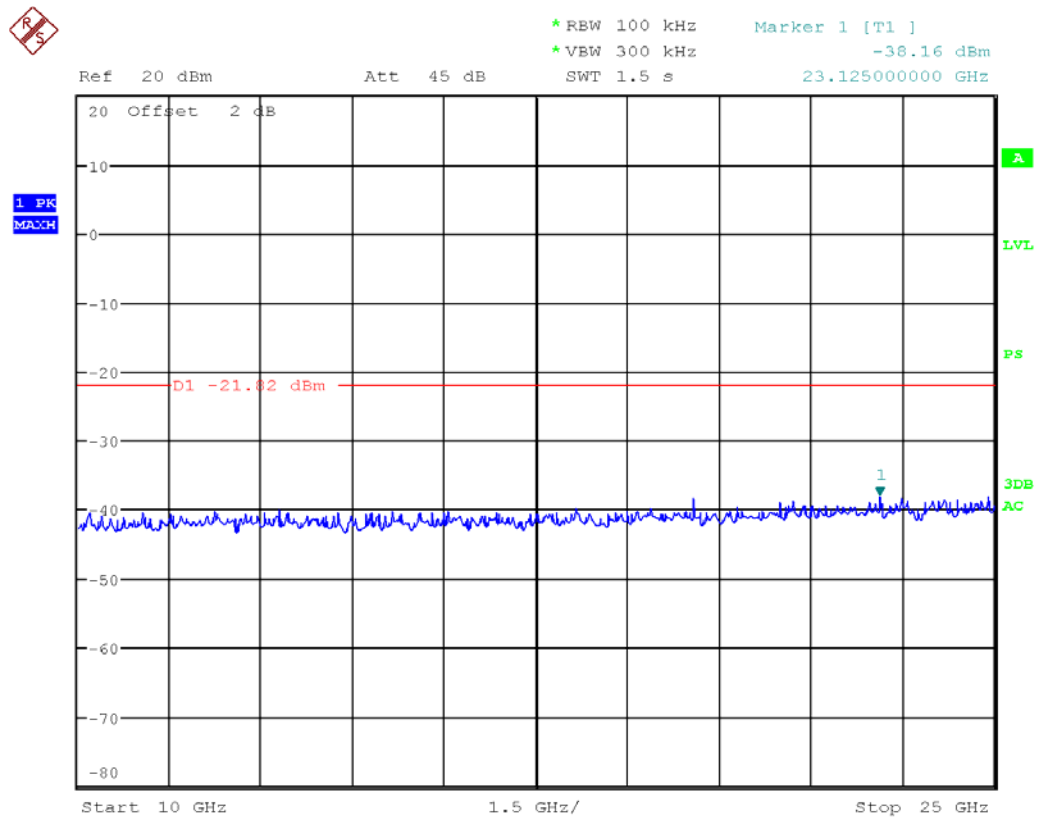




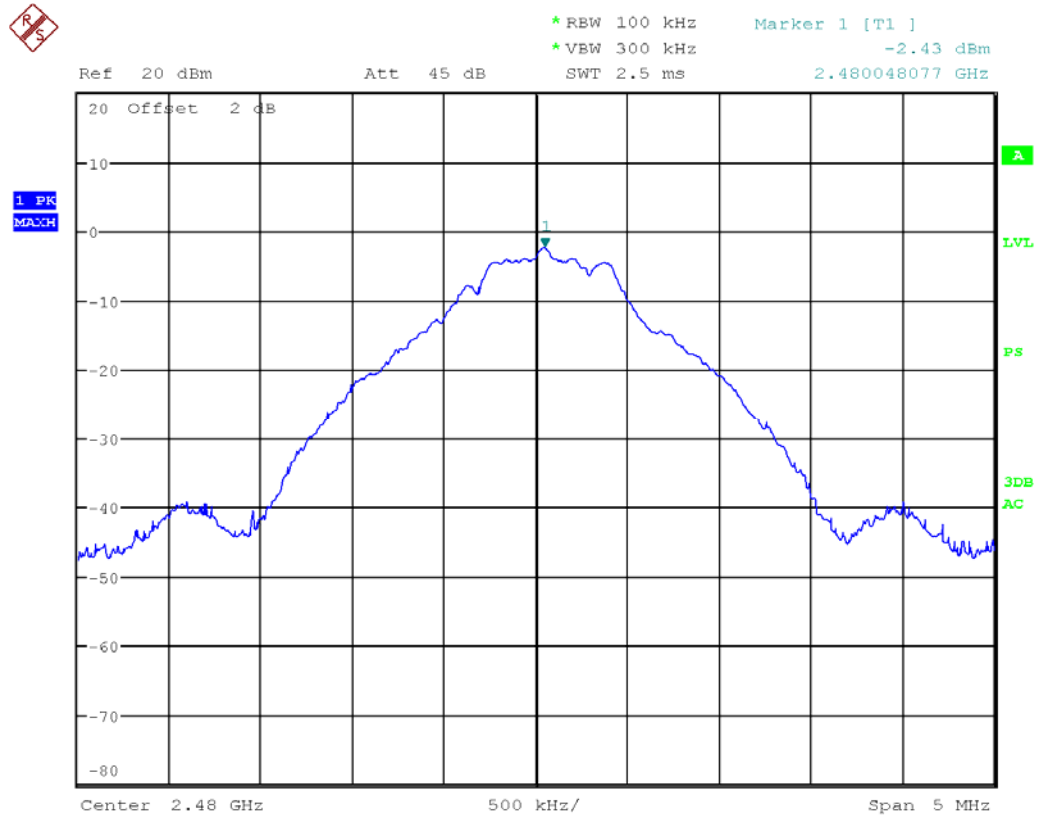
1G-10G



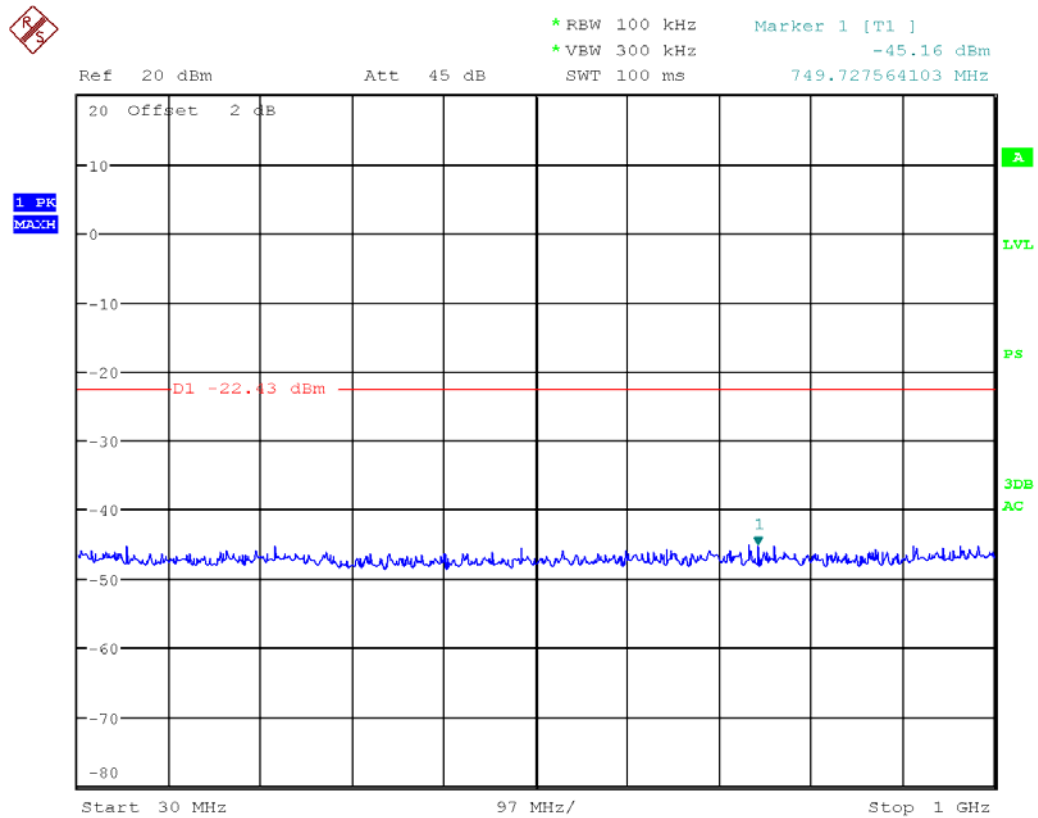
10G-25G



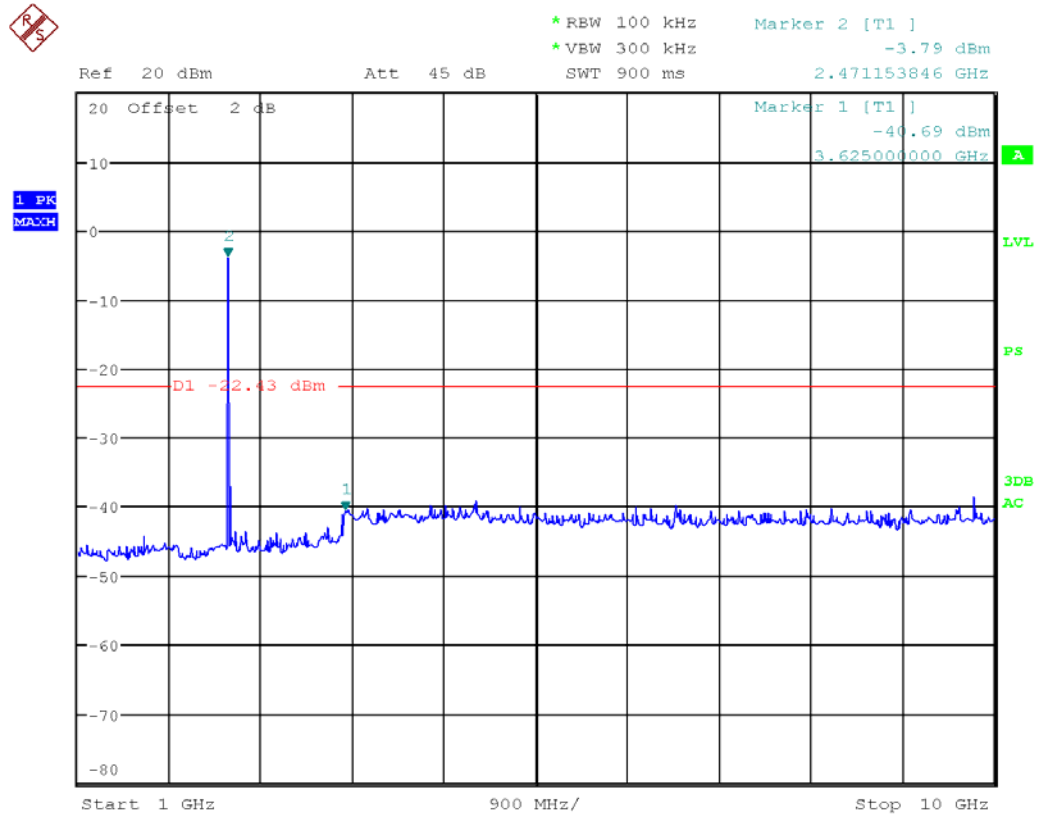
GFSK mode:  
Channel 2480MHz  
Reference level



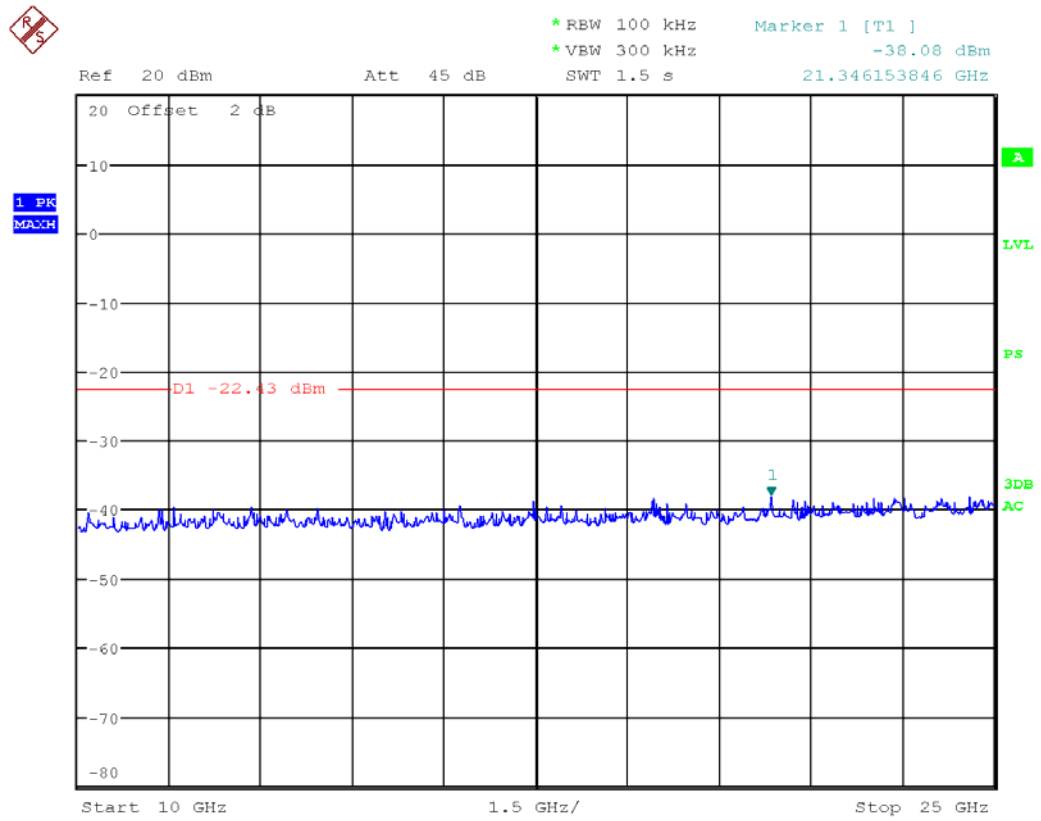
30M-1G



1G-10G



10-25GHz



## 11. BAND-EDGE MEASUREMENTS

### 11.1 LIMITS

FCC 15.247(d) & 15.209

### 11.2 TEST PROCEDURES

Test procedures follow KDB 558074 D01 DTS Measurement Guidance v03r01.

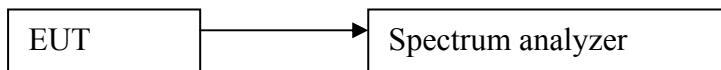
Remove the antenna from the EUT and then connect a low attenuation cable from the antenna port to the spectrum.

1. Reference level measurement

Below 1GHz Set the spectrum analyzer: RBW =100KHz VBW  $\geq 3 \times$  RBW, Set the span to  $\geq 1.5$  times the DTS bandwidth. Sweep = auto; Detector Function = peak. Trace = Max-hold. Allow the trace to stabilize.

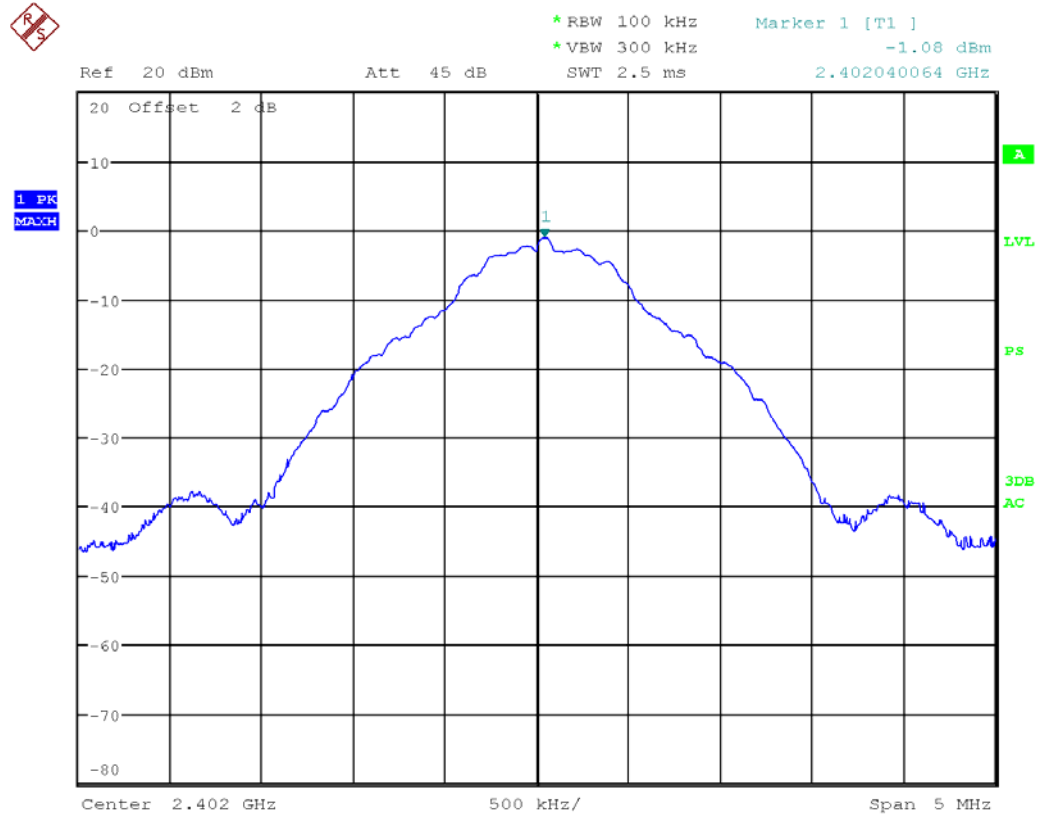
2. Set the spectrum analyzer: RBW =100KHz VBW  $\geq 3 \times$  RBW, Set the span to  $\geq 1.5$  times the DTS bandwidth. Sweep = auto; Detector Function = peak. Trace = Max-hold. Allow the trace to stabilize.

### 11.3 TEST SETUP

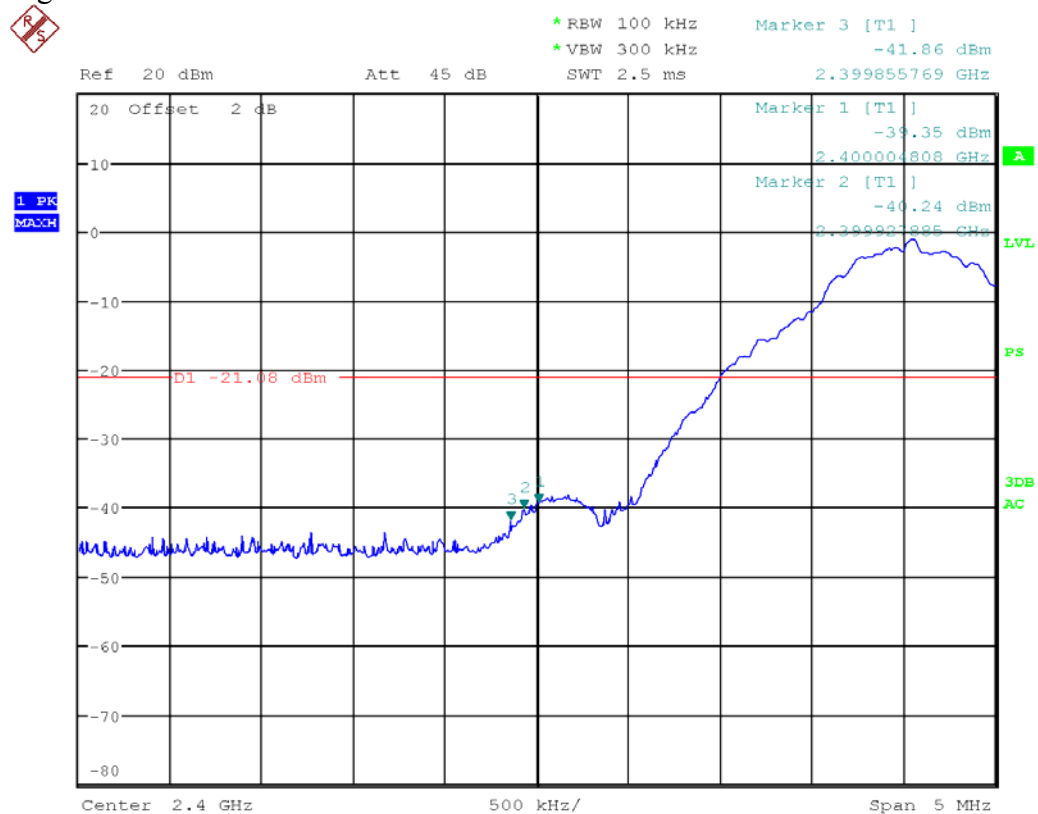


### 11.4 TEST RESULTS

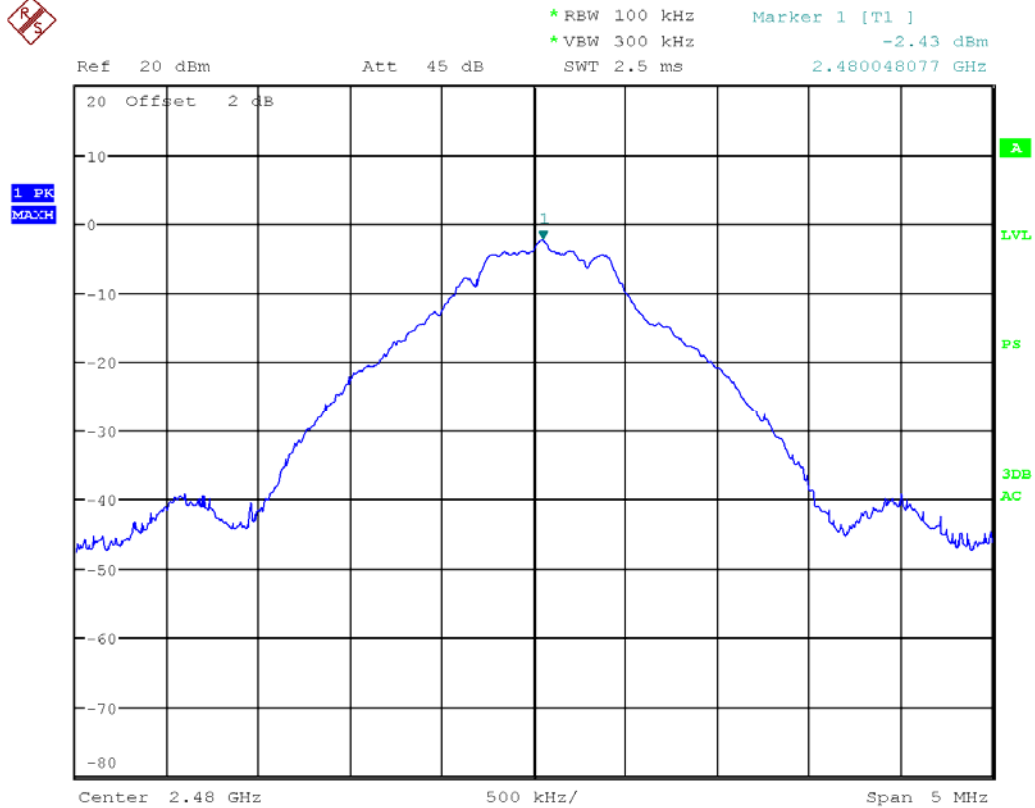
GFSK mode:  
Channel 2402MHz  
reference level:



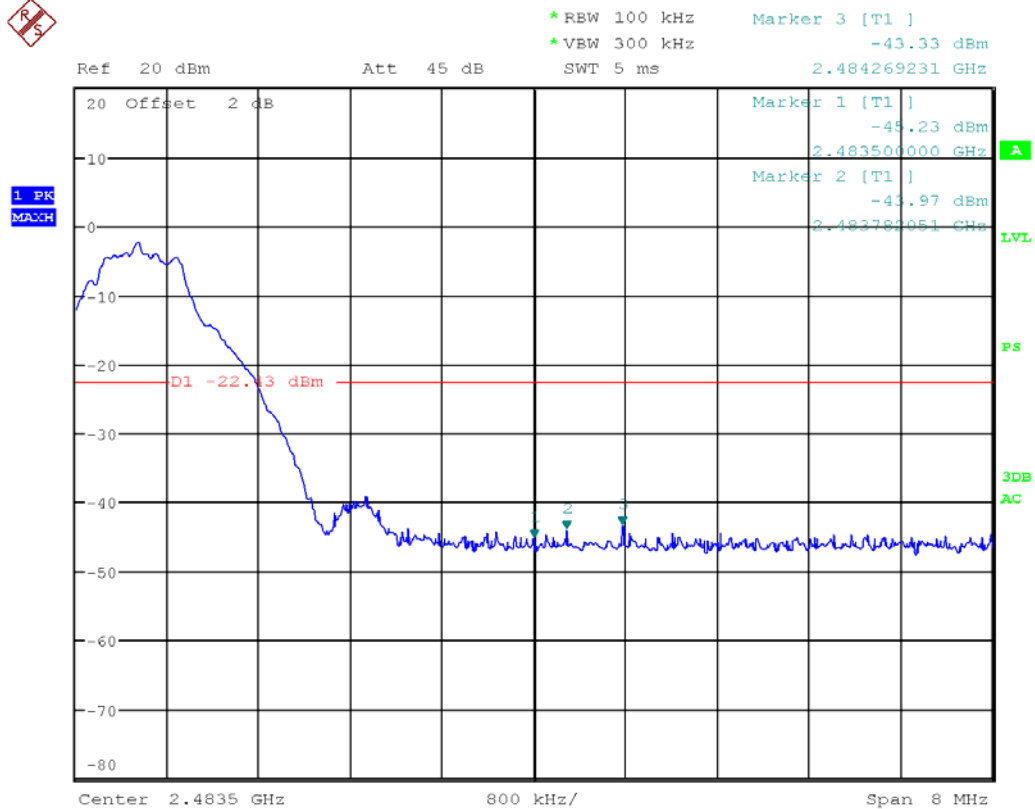
Band edge:



GFSK mode:  
Channel 2480MHz  
reference level:



Band edge:



## 11.5 RADIATED EMISSIONS WHICH FALL IN THE RESTRICTED BANDS

Section 15.247(d) 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)).

Test Requirement:

Section 15.205 Restricted bands of operation.

(a) Except as shown in paragraph (d) of this section. only spurious emissions are permitted in any of the frequency bands listed below:

MHz	MHz	MHz	GHz
0.090 - 0.110	16.42 - 16.423	399.9 - 410	4.5 - 5.15
<sup>1</sup> 0.495 - 0.505	16.69475 -	608 - 614	5.35 - 5.46
2.1735 - 2.1905	16.69525	960 - 1240	7.25 - 7.75
4.125 - 4.128	16.80425 -	1300 - 1427	8.025 - 8.5
4.17725 - 4.17775	16.80475	1435 - 1626.5	9.0 - 9.2
4.20725 - 4.20775	25.5 - 25.67	1645.5 - 1646.5	9.3 - 9.5
6.215 - 6.218	37.5 - 38.25	1660 - 1710	10.6 - 12.7
6.26775 - 6.26825	73 - 74.6	1718.8 - 1722.2	13.25 - 13.4
6.31175 - 6.31225	74.8 - 75.2	2200 - 2300	14.47 - 14.5
8.291 - 8.294	108 - 121.94	2310 - 2390	15.35 - 16.2
8.362 - 8.366	123 - 138	2483.5 - 2500	17.7 - 21.4
8.37625 - 8.38675	149.9 - 150.05	2655 - 2900	22.01 - 23.12
8.41425 - 8.41475	156.52475 -	3260 - 3267	23.6 - 24.0
12.29 - 12.293	156.52525	3332 - 3339	31.2 - 31.8
12.51975 -	156.7 - 156.9	3345.8 - 3358	36.43 - 36.5
12.52025	162.0125 - 167.17	3600 - 4400	
12.57675 -	167.72 - 173.2		
12.57725	240 - 285		
13.36 - 13.41	322 - 335.4		

The field strength was measured with an EMI measuring receiver and 1 MHz RBW / VBW for peak and with 1MHz RBW / 10Hz VBW for average at a distance of 3m.



**Test Result:****Channel Low 2402MHz**

No.	Freq MHz	Reading dBuV	Factor dB	Level dBuV/m	Limit dBuV/m	Over Limit dB	Remark	Pol V/H
1	2310.000	28.56	4.96	33.52	74.00	-40.48	Peak	VERTICAL
2	2310.000	16.52	4.96	21.48	54.00	-32.52	AV	VERTICAL
3	2390.000	28.09	5.25	33.34	74.00	-40.66	Peak	VERTICAL
4	2390.000	16.41	5.25	21.66	54.00	-32.34	AV	VERTICAL
5	2400.000	30.61	5.29	35.90	74.00	-38.10	Peak	VERTICAL
6	2400.000	16.94	5.29	22.23	54.00	-31.77	AV	VERTICAL
1	2310.000	27.04	4.96	32.00	74.00	-42.00	Peak	HORIZONTAL
2	2310.000	16.49	4.96	21.45	54.00	-32.55	AV	HORIZONTAL
3	2390.000	27.88	5.25	33.13	74.00	-40.87	Peak	HORIZONTAL
4	2390.000	16.35	5.25	21.60	54.00	-32.40	AV	HORIZONTAL
5	2400.000	33.02	5.29	38.31	74.00	-35.69	Peak	HORIZONTAL
6	2400.000	19.87	5.29	25.16	54.00	-28.84	AV	HORIZONTAL

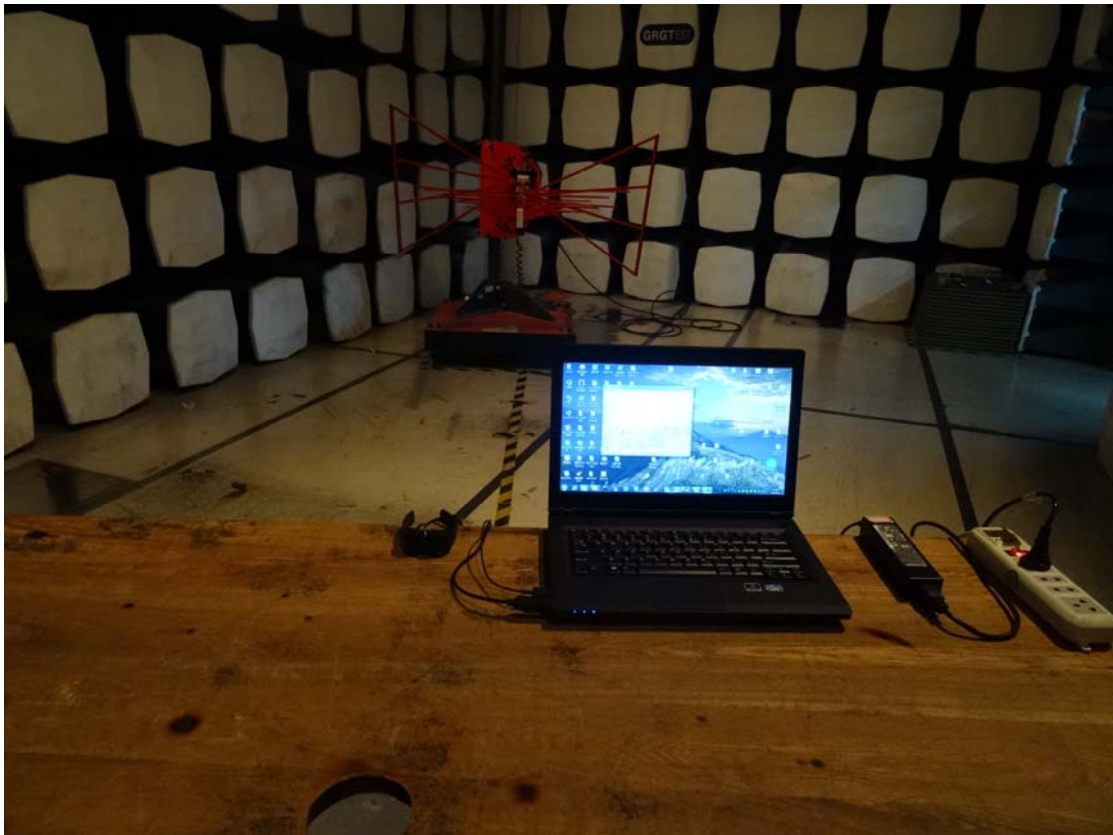
**Channel High**

No.	Freq MHz	Reading dBuV	Factor dB	Level dBuV/m	Limit dBuV/m	Over Limit dB	Remark	Pol V/H
1	2483.500	28.53	5.60	34.13	74.00	-39.87	Peak	VERTICAL
2	2483.500	17.30	5.60	22.90	54.00	-31.10	AV	VERTICAL
3	2500.000	27.43	5.66	33.09	74.00	-40.91	Peak	VERTICAL
4	2500.000	16.58	5.66	22.24	54.00	-31.76	AV	VERTICAL
1	2483.500	28.05	5.60	33.65	74.00	-40.35	Peak	HORIZONTAL
2	2483.500	17.29	5.60	22.89	54.00	-31.11	AV	HORIZONTAL
3	2500.000	27.06	5.66	32.72	74.00	-41.28	Peak	HORIZONTAL
4	2500.000	16.57	5.66	22.23	54.00	-31.77	AV	HORIZONTAL

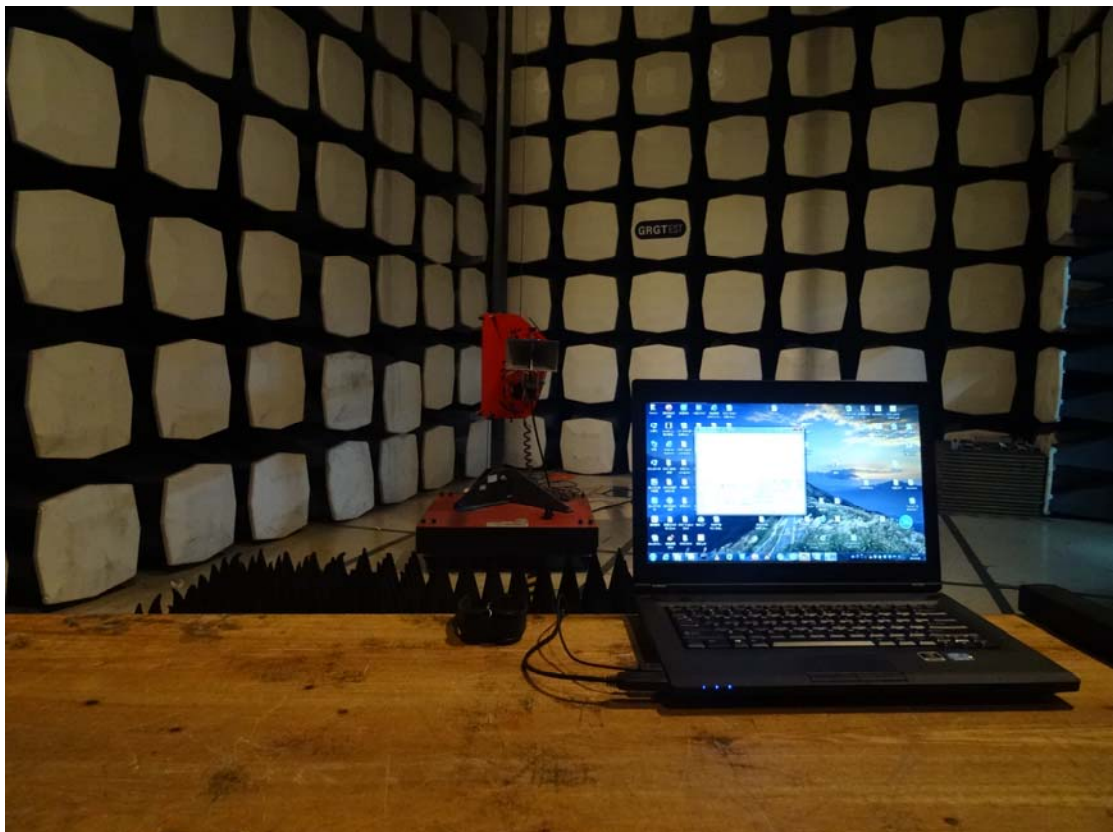
Remark: Max field strength in 3m distance. No any other emissions which fall in restricted bands can be detected and be reported.

## APPENDIX A: PHOTOGRAPH OF THE TEST ARRANGEMENT

RSE (Below 1GHz)



RSE (Above 1GHz)



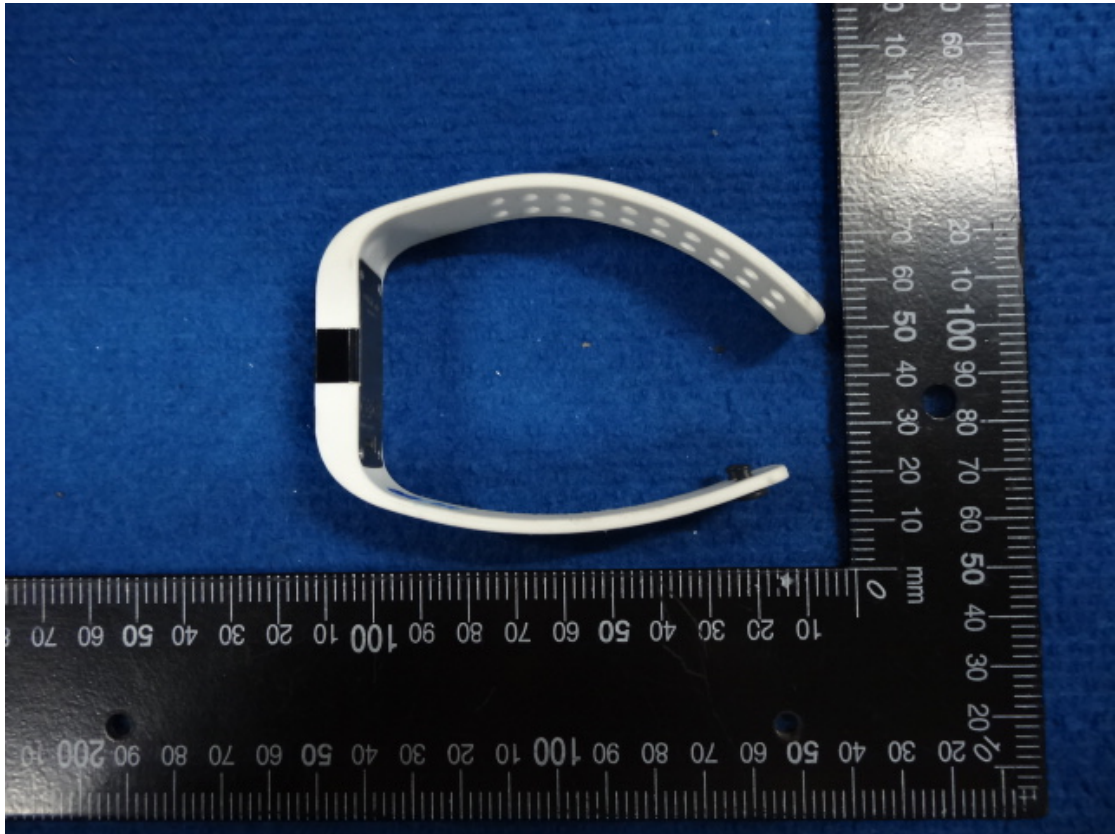
CE



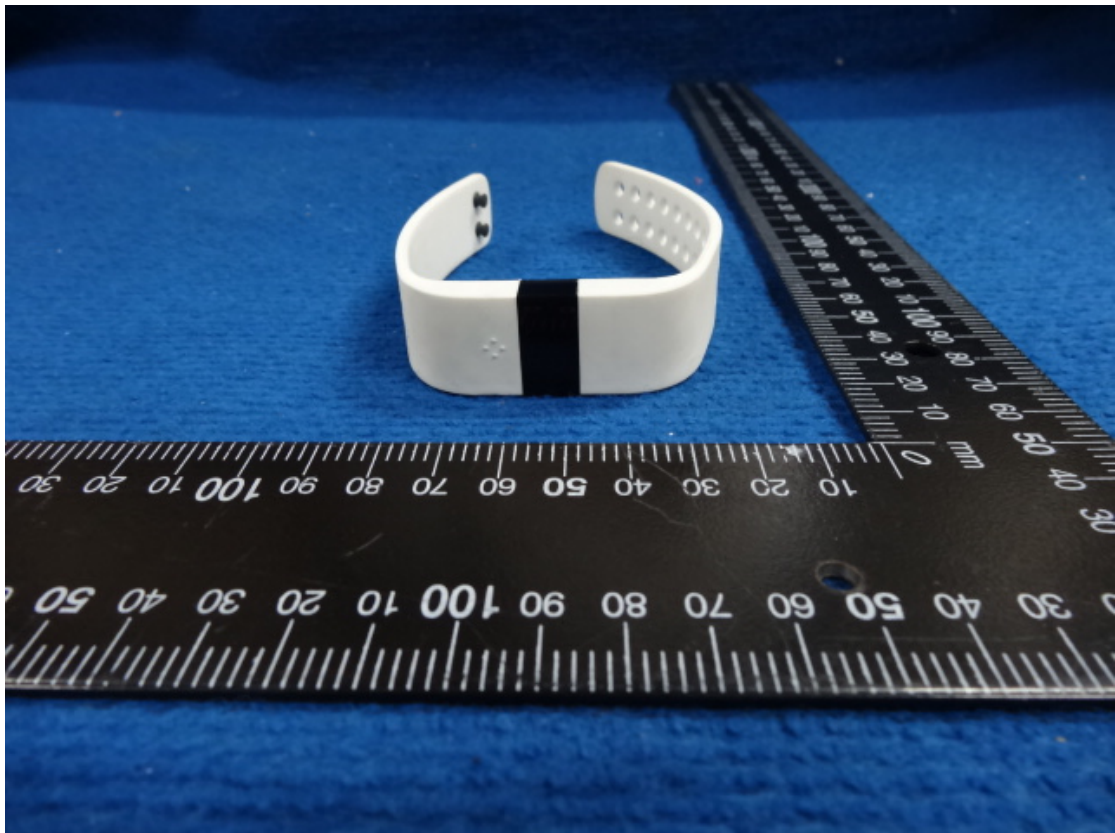


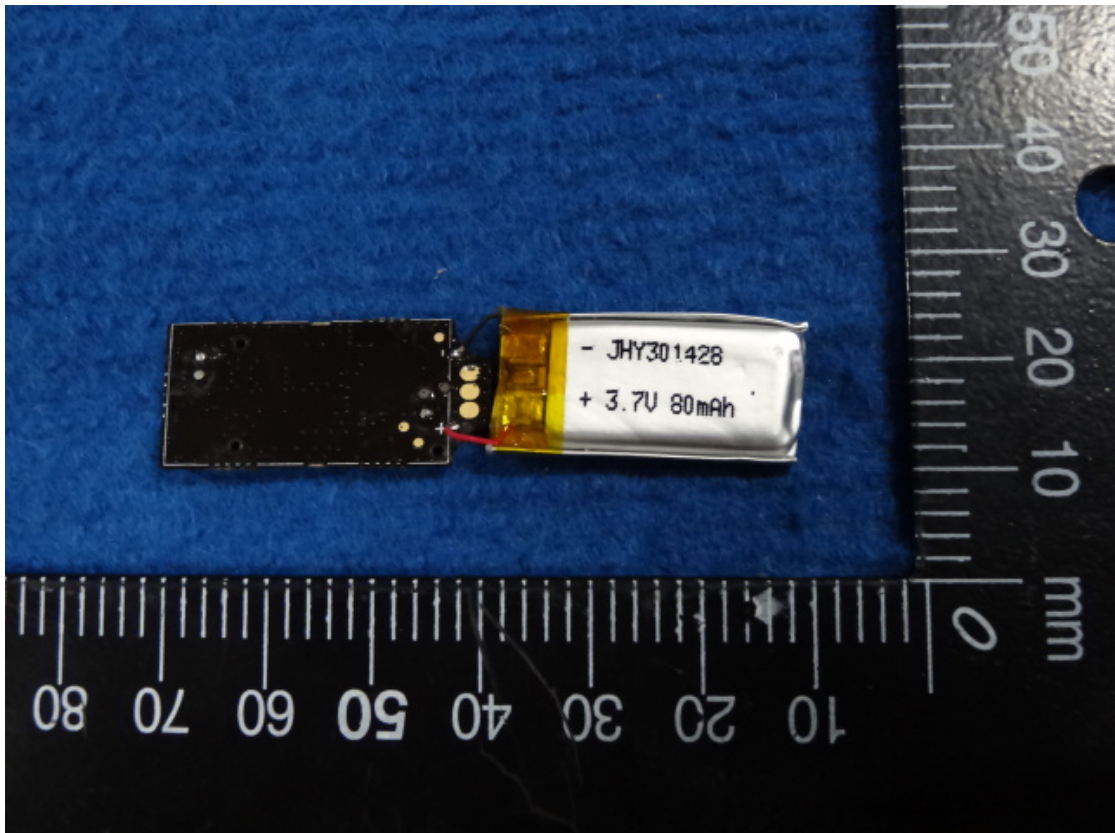
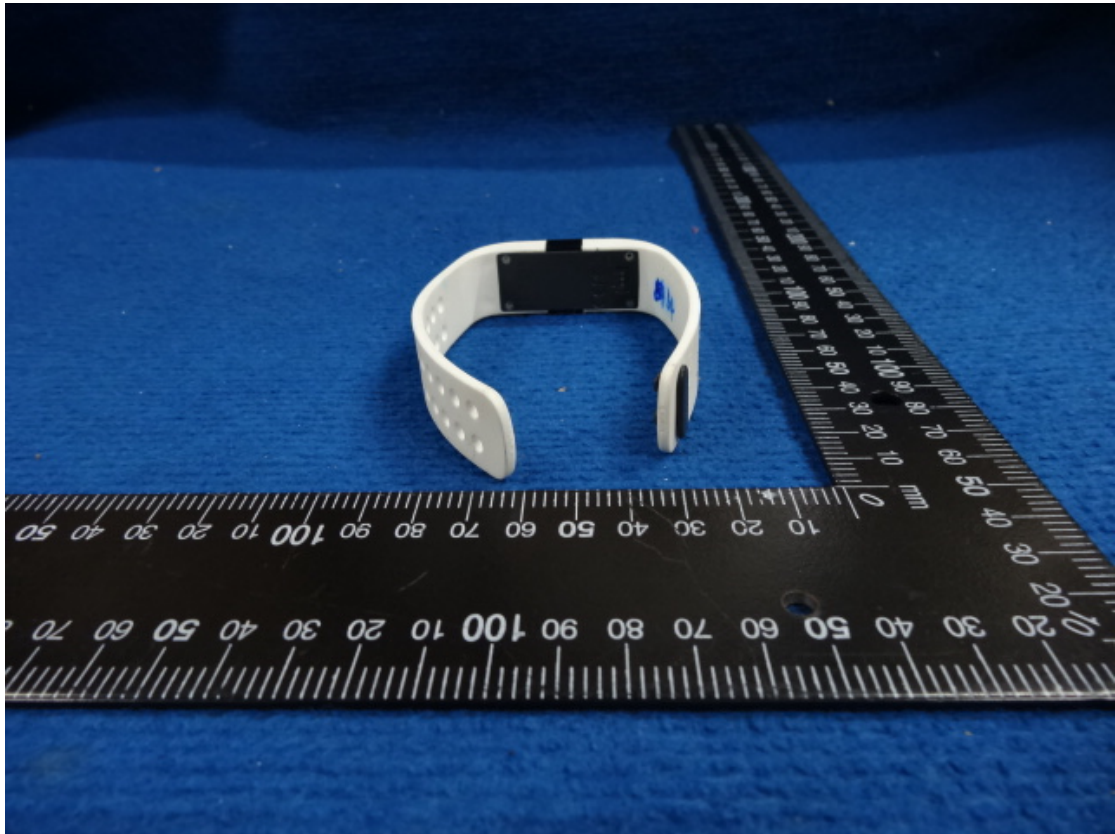
## APPENDIX B: PHOTOGRAPH OF THE EUT



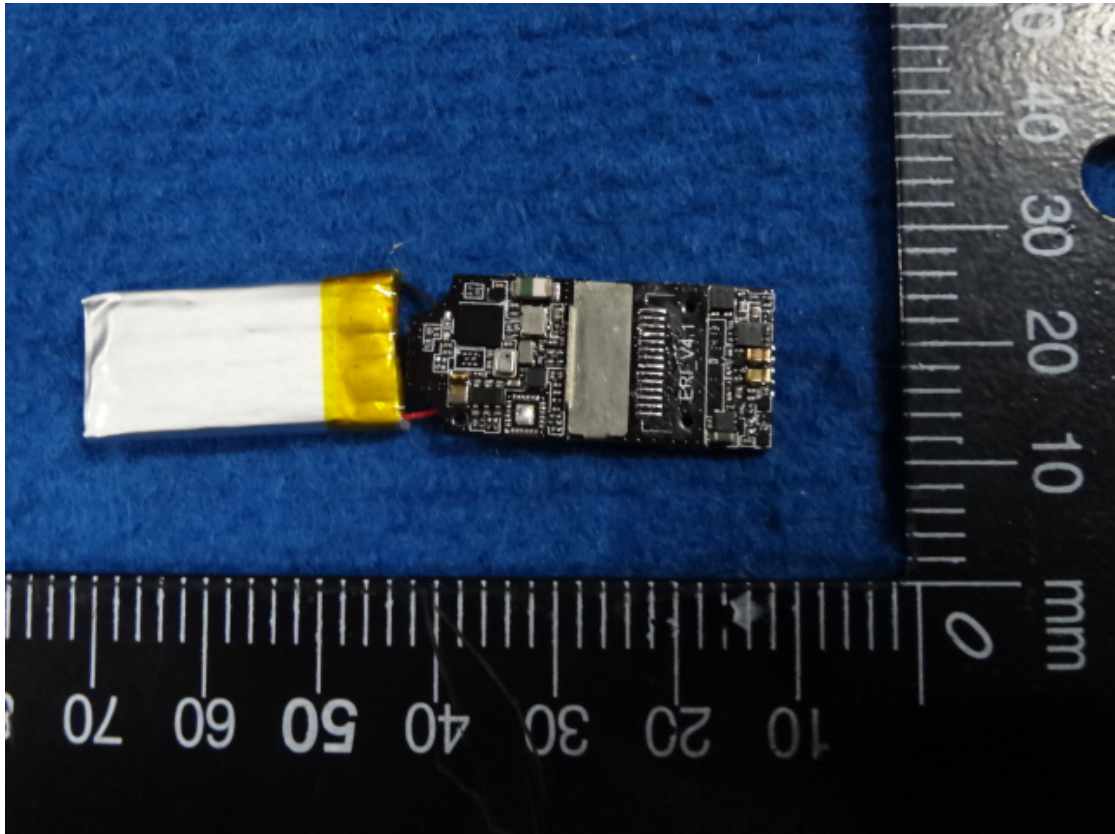












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