

# FCC Test Report

## Part 15 subpart C

**Application Type** : Class II Permissive Change

**Class II Permissive Change** : please see FCC change documents

**Original Grant Date** : 09/10/2014

### Client Information:

Applicant : Ascion, LLC  
Applicant add.: 341 Central Avenue Silver Creek, NY 14136

### EUT Information:

EUT Name : Reverie 4.1 Bluetooth Speaker  
Model No. : AM-BT-S01  
Brand Name :   
FCC ID : VFK-AM-BT-S01

### Prepared By:

**Asia Institute Technology (Dongguan) Limited**

Add. : No. 22, JinQianLing Street 3, JiTiGang Village HuangJiang Town, DongGuan,  
GuangDong, China.

Date of Receipt: Jan. 29, 2015

Date of Test: Jan. 30, 2015~Feb. 02, 2015


Date of Issue: Feb. 02, 2015


Test Result: **Pass**

### Test procedure used: ANSI C63.4-2009

This device described above has been tested by Asia Institute Technology (Dongguan) Limited, and the test results show that the equipment under test (EUT) is in compliance with the FCC requirements. And it is applicable only to the tested sample identified in the report.

\*This test report must not be used by the client to claim product endorsement by any agency of the U.S. government.

Reviewed by:   
Seal.Chen

Approved by:   
Jackie.Deng

# 1 Contents

	Page
<b>COVER PAGE</b>	
<b>1 CONTENTS</b> .....	<b>2</b>
<b>2 TEST SUMMARY</b> .....	<b>3</b>
2.1 COMPLIANCE WITH FCC PART 15 SUBPART C .....	3
2.2 MEASUREMENT UNCERTAINTY .....	5
<b>3 TEST FACILITY</b> .....	<b>6</b>
3.1 DEVIATION FROM STANDARD .....	6
3.2 ABNORMALITIES FROM STANDARD CONDITIONS .....	6
<b>4 GENERAL INFORMATION</b> .....	<b>7</b>
4.1 GENERAL DESCRIPTION OF EUT .....	7
4.2 DESCRIPTION OF TEST CONDITIONS .....	9
4.3 EUT PERIPHERAL LIST .....	10
4.4 TEST PERIPHERAL LIST .....	10
<b>5 EQUIPMENTS LIST FOR ALL TEST ITEMS</b> .....	<b>11</b>
<b>6 TEST RESULT</b> .....	<b>12</b>
6.1 CONDUCTION EMISSIONS MEASUREMENT .....	12
6.1.1 Applied procedures / Limit.....	12
6.1.2 Test procedure .....	12
6.1.3 Test results .....	13
6.2 RADIATED EMISSIONS MEASUREMENT .....	15
6.2.1 Applied procedures / Limit.....	15
6.2.2 Test procedure .....	15
6.2.3 Test Result .....	16
6.2.4 TEST RESULTS (Restricted Bands Requirements) .....	21
6.3 MAXIMUM PEAK OUTPUT POWER .....	22
6.3.1 Applied procedures / Limit.....	22
6.3.2 Test procedure .....	22
6.3.3 Deviation from standard .....	22
6.3.4 Test setup.....	22
6.3.5 Test results .....	23

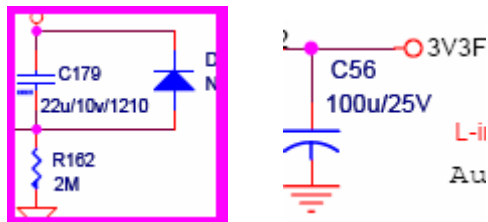
## 2 Test Summary

### 2.1 Compliance with FCC Part 15 subpart C

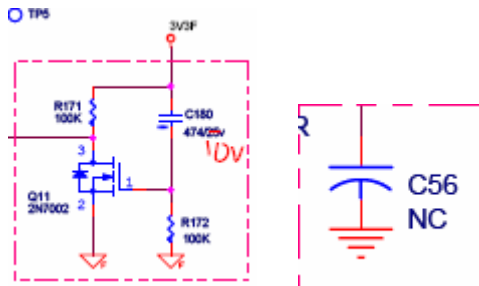
Test	Test Requirement	Standard Paragraph	Result
Conduction Emissions	FCC Part 15 C:2013	Section 15.207(a)	<b>PASS</b>
Radiated Emissions	FCC Part 15 C:2013	Section 15.247(d)	<b>PASS</b>
Maximum Peak Output Power	FCC Part 15 C:2013	Section 15.247(b)(1)	<b>PASS</b>
Band edge	FCC Part 15 C:2013	Section 15.247(d)	<b>PASS</b>

Note:1. Reference to the FCC Public Notice DA 00-705

2.Original circuit as below:



Modified circuit as below:



1. Change C56 from 100 $\mu$ /25V to NC
2. Change C168 from 1n/10V to 1n/50V
3. Replaced D9 (4148),C179 (22 $\mu$ /10v) and R162 (2M) with Q11 (2N7002), R171 (100K), C180 (474/10v) incl. PCB layout change

Except for the changes above, no other modification is performed. There is no hardware or electrical modification made to the applying transmitter itself. These changes enhance module power supply stability, other parameters are the same as the voltage and current, and will not affect the Bluetooth module and the RF characteristic will not change

So, the EUT need to be retested for Radiated Emission, Conducted Emission and Maximum Peak Output Power. The test data of other items is the same with the original report E-F1406001-2.

## 2.2 Measurement Uncertainty

All measurements involve certain levels of uncertainties, The following measurements uncertainty Levels have estimated based on ANSI C63.4:2009, the maximum value of the uncertainty as below

No.	Item	Uncertainty
1	Conducted Emission Test	1.20dB
2	Radiated Emission Test	3.30dB

### 3 Test Facility

**The test facility is recognized, certified or accredited by the following organizations:**

**.CNAS- Registration No: L6177**

Dongguan Yaxu (AiT) technology Limited is accredited to ISO/IEC 17025:2005 general Requirements for the competence of testing and calibration laboratories (CNAS-CL01 Accreditation Criteria for the competence of testing and calibration laboratories) on Apr. 18, 2013

**.FCC- Registration No: 248337**

The 3m Semi-Anechoic Chamber, 3m/10m Open Area Test Site and Shielding Room of Asia Institute Technology (Dongguan) Limited have been registered by Federal Communications Commission (FCC) on Dec.19, 2012.

**.Industry Canada(IC)-Registration No: IC6819A-1 & IC6819A-2**

The 3m Semi-Anechoic Chamber and 3m/10m Open Area Test Site of Asia Institute Technology (Dongguan) Limited have been registered by Certification and Engineering Bureau of Industry Canada for radio equipment testing on Jun. 12, 2013.

**.VCCI- Registration No: 2705**

The 3m/10m Open Area Test Site, Shielding Room and 3m Chamber of Asia Institute Technology (Dongguan) Limited have been registered by Voluntary Control Council for Interference on Nov. 21, 2012. The Telecommunication Ports Conducted Disturbance Measurement of Asia Institute Technology (Dongguan) Limited have been registered by Voluntary Control Council for Interference on Sep. 06, 2011.

**.TUV NORD**

Asia Institute Technology (Dongguan) Limited has been assessed on Jun. 13, 2013 that it can carry out EMC tests by order and under supervision of TUV NORD.

**.ITS- Registration No: TMPSHA031**

Asia Institute Technology (Dongguan) Limited has been assessed and included in Intertek Shanghai TMP Program regarding Laboratory facilities and test equipment on Jul.22, 2012.

#### 3.1 Deviation from standard


None

#### 3.2 Abnormalities from standard conditions

None

## 4 General Information

### 4.1 General Description of EUT

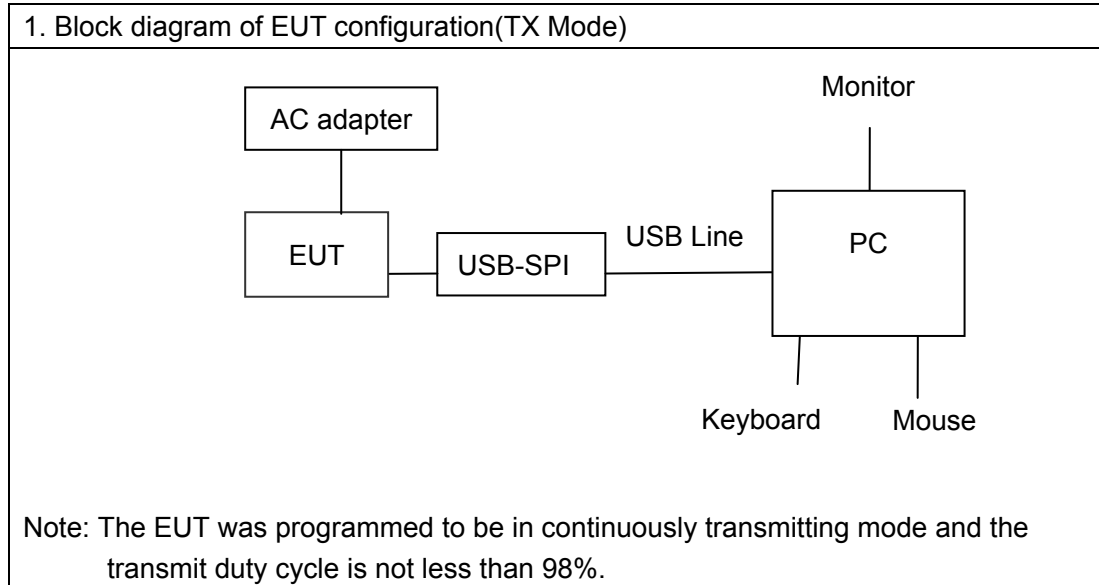
Manufacturer:	GIGATEK ELECTRONICS (DongGuan) CO.,LTD	
Manufacturer Address:	IN Yang Industrial, Zhangyang District, Zhangmutou Town, Dongguan City, Guandong, China 523636	
EUT Name:	Reverie 4.1 Bluetooth Speaker	
Model No:	AM-BT-S01	
Operation frequency:	2402 MHz to 2480 MHz	
NUMBER OF CHANNEL:	40	
Modulation Technology:	GFSK(1Mbps)	
Antenna Type:	dipole	
Antenna Gain:	max 2.11dBi	
Brand Name:		
Serial No:	N/A	
Power Supply Range:	Input: 100-240Vac, 50/60Hz, 1.5A Output: DC 16V 3.2A	
Power Supply:	DC 16.0V from Adapter,AC 120V/60Hz for Adapter	
Power Cord:	N/A	
Output power (max) :	(The old data)	1Mbps: 6.08dBm
	(The new data)	1Mbps: 5.99dBm
Note:		
	1.	For a more detailed features description, please refer to the manufacturer's specifications or the User's Manual.

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



## 4.2 Description of Test conditions

- (1) EUT was tested in normal configuration (Please See following Block diagram)



- (2) E.U.T. test conditions:

15.31(e): For intentional radiators, measurements of the variation of the input power or the radiated signal level of the fundamental frequency component of the emission, as appropriate, shall be performed with the supply voltage varied between 85% and 115% of the nominal rated supply voltage. For battery operated equipment, the equipment tests shall be performed using a new battery.

- (3) Test frequencies:

According to the 15.31(m) Measurements on intentional radiators or receivers, other than TV broadcast receivers, shall be performed and. If required reported for each band in which the device can be operated with the device operating at the number of frequencies in each band specified in the following table:

Frequency range over which device operates	Number of frequencies	Location in the range of operation
1 MHz or less	1	Middle
1 to 10 MHz	2	1 near top and 1 near bottom
More than 10 MHz	3	1 near top, 1 near middle and 1 near bottom

- (4) Frequency range of radiated measurements:

According to the 15.33, the test range will be up to the tenth harmonic of the highest fundamental frequency.

### 4.3 EUT Peripheral List

No.	Equipment	Manufacturer	Model No.	Serial No.	Power cord	signal cable
1	N/A	N/A	N/A	N/A	N/A	N/A

### 4.4 Test Peripheral List

No.	Equipment	Manufacturer	EMC Compliance	Model No.	Serial No.	Power cord	signal cable
1	Personal computer	H P	CE 、 FCC	DX2310	CNG8250MZ3	1.8m/unshielded /detachable	N/A
2	Keyboard	DELL	CE	SK-8115	CN-ONM432-71616-81M-OLK B	N/A	1.5m/unshielded /undetachable
3	Mouse	Microsoft	CE	X800898	30603	N/A	1.5m/unshielded /undetachable
4	Monitor	DELL	CE	T980KAC DK21SN	TWS20006045	1.8m/unshielded /detachable	1.8m/shielded /detachable
5	USB-SPI	CSR	N/A	N/A	N/A	N/A	0.8m/shielded /detachable

## 5 Equipments List for All Test Items

No	Test Equipment	Manufacturer	Model No	Serial No	Cal. Date	Cal. Due Date
1	Spectrum Analyzer	ADVANTEST	R3182	150900201	2014.06.27	2015.06.26
2	EMI Measuring Receiver	R&S	ESR	101660	2014.12.01	2015.11.30
3	Low Noise Pre Amplifier	Tsj	MLA-10K01-B01-27	1205323	2014.06.27	2015.06.26
4	Low Noise Pre Amplifier	Tsj	MLA-0120-A02-34	2648A04738	2014.12.02	2015.12.01
5	TRILOG Super Broadband test Antenna	SCHWARZBECK	VULB9160	9160-3206	2014.12.03	2015.12.02
6	Broadband Horn Antenna	SCHWARZBECK	BBHA9120D	452	2014.12.03	2015.12.02
7	SHF-EHF Horn	SCHWARZBECK	BBHA9170	BBHA9170367	2014.12.03	2015.12.02
8	50Ω Coaxial Switch	Anritsu	MP59B	6200264416	2014.09.26	2015.09.25
9	EMI Test Receiver	R&S	ESCI	100124	2014.06.20	2015.06.19
10	LISN	Kyoritsu	KNW-242	8-837-4	2014.06.20	2015.06.19
11	LISN	Kyoritsu	KNW-407	8-1789-3	2014.06.20	2015.06.19
12	50Ω Coaxial Switch	Anritsu	MP59B	6200264417	2014.09.25	2015.09.24
13	Loop Antenna	ARA	PLA-1030/B	1029	2014.03.19	2015.03.18
14	Power Meter	R&S	NRVS	101336	2014.06.27	2015.06.26
15	Power Sensor	R&S	URV5-Z7	100077	2014.06.27	2015.06.26
16	Radiated Cable 1# (30MHz-1GHz)	FUJIKURA	5D-2W	01	2015.01.04	2016.01.03
17	Radiated Cable 2# (1GHz -25GHz)	FUJIKURA	10D2W	02	2014.12.25	2015.12.24
18	Conducted Cable 1#(9KHz-30MHz)	FUJIKURA	1D-2W	01	2015.01.04	2016.01.03

## 6 Test Result

### 6.1 Conduction Emissions Measurement

#### 6.1.1 Applied procedures / Limit

Frequency of Emission (MHz)	Conducted Limit (dB $\mu$ V)	
	Quasi-peak	Average
0.15-0.5	66 to 56 *	56 to 46 *
0.5-5	56	46
5-30	60	50

Note: Decreases with the logarithm of the frequency.

#### 6.1.2 Test procedure

EUT was placed upon a wooden test table 0.8m above the horizontal metal reference plane and 0.4m from the vertical ground plane, and it was connected to an AMN. The closest distance between the boundary of the EUT and the surface of the AMN is 0.8m. All peripherals were connected to another AMN, and placed at a distance of 10cm from each other. A spectrum and receiver was connected to the RF output port of the AMN. Both average and quasi-peak value were detected.

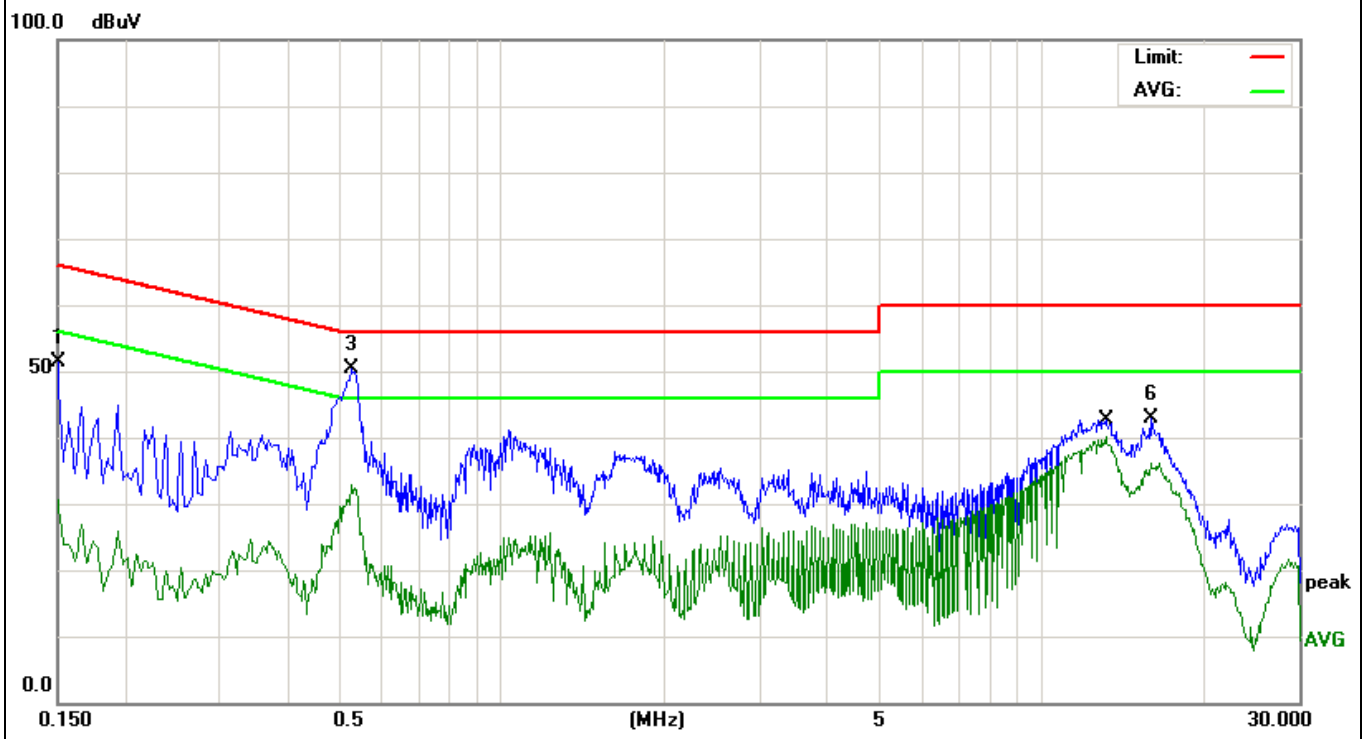
### 6.1.3 Test results

EUT:	Reverie 4.1 Bluetooth Speaker	Model Name. :	AM-BT-S01
Temperature:	26 °C	Relative Humidity:	54%
Pressure:	1010hPa	Test Date :	2015-01-30
Test Mode:	TX	Phase :	Line
<b>Test Voltage :</b>	DC 16.0V from Adapter , AC 120V/60Hz for Adapter		

Frequency (MHz)	Meter Reading (dBμV)	Factor(dB)	Emission Level (dBμV)	Limits (dBμV)	Margin (dB)	Detector
0.1500	39.33	11.94	51.27	65.99	-14.72	Quasi-Peak
0.1500	18.57	11.94	30.51	55.99	-25.48	Average
*0.5260	40.26	10.01	50.27	56.00	-5.73	Quasi-Peak
0.5260	22.96	10.01	32.97	46.00	-13.03	Average
15.8980	41.26	1.51	42.77	60.00	-17.23	Quasi-Peak
13.1420	38.65	1.36	40.01	50.00	-9.99	Average

Remark:

- Factor = Insertion Loss + Cable Loss.
- \*' means the worst case.

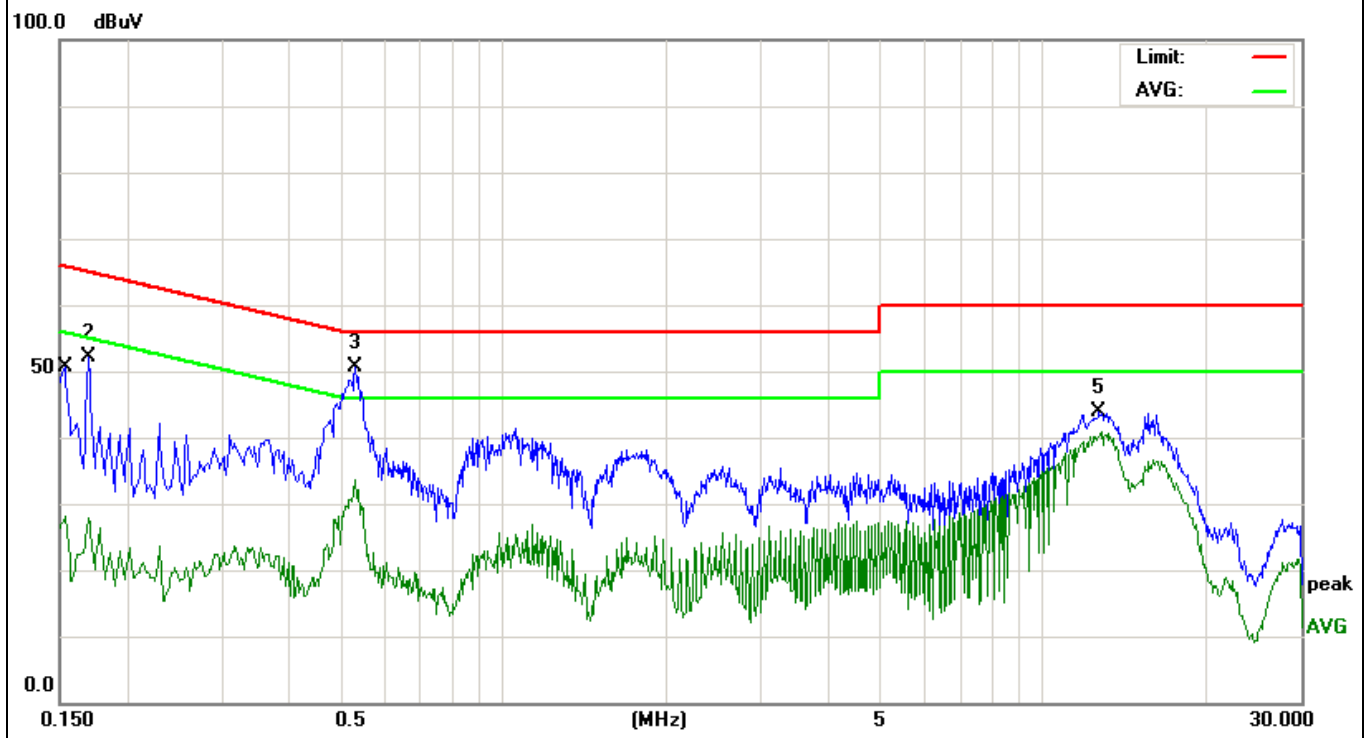


EUT:	Reverie 4.1 Bluetooth Speaker	Model Name. :	AM-BT-S01
Temperature:	26 °C	Relative Humidity:	54%
Pressure:	1010hPa	Test Date :	2015-01-30
Test Mode:	TX	Phase :	Neutral
<b>Test Voltage :</b>	DC 16.0V from Adapter , AC 120V/60Hz for Adapter		

Frequency (MHz)	Meter Reading (dBμV)	Factor(dB)	Emission Level (dBμV)	Limits (dBμV)	Margin (dB)	Detector
0.1700	40.60	11.55	52.15	64.96	-12.81	Quasi-Peak
0.1539	16.24	11.84	28.08	55.78	-27.70	Average
*0.5299	40.62	10.01	50.63	56.00	-5.37	Quasi-Peak
0.5299	23.63	10.01	33.64	46.00	-12.36	Average
12.7100	42.60	1.35	43.95	60.00	-16.05	Quasi-Peak
12.8500	39.62	1.35	40.97	50.00	-9.03	Average

Remark:

- Factor = Insertion Loss + Cable Loss.
- '\*' means the worst case.



## 6.2 Radiated Emissions Measurement

### 6.2.1 Applied procedures / Limit

15.247(d) In any 100 kHz bandwidth outside the frequency band in which the spread spectrum or digitally modulated 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 either an RF conducted or a radiated measurement, provided the transmitter demonstrates compliance with the peak conducted power limits. If the transmitter complies with the conducted power limits based on the use of RMS averaging over a time interval, as permitted under paragraph (b)(3) of this section, the attenuation required under this paragraph shall be 30 dB instead of 20 dB. 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)).

Frequency of Emission (MHz)	Field Strength		Measurement Distance (meters)
	$\mu\text{V/m}$	$\text{dB}\mu\text{V/m}$	
0.009-0.49	2400/F(kHz)		300
0.49-1.705	24000/F(kHz)		30
1.705-30	30		30
30-88	100	40	3
88-216	150	43.5	3
216-960	200	46	3
Above 960	500	54	3

### 6.2.2 Test procedure

EUT was placed upon a wooden test table which was placed on the turn table 0.8m above the horizontal metal ground plane, and operating in the mode as mentioned above. A receiving antenna was placed 3m away from the EUT. During testing, turn around the turn table and move the antenna from 1m to 4m to find the maximum field-strength reading. All peripherals were placed at a distance of 10cm between each other. Both horizontal and vertical antenna polarities were tested and performed pretest to three orthogonal axis. The worst case emissions were reported.

### 6.2.3 Test Result

#### Radiated Emissions Test Data Below 30MHz

EUT:	Reverie 4.1 Bluetooth Speaker	Model Name :	AM-BT-S01
Temperature:	25 °C	Test Data	2015-01-30
Pressure:	1005 hPa	Relative Humidity:	60%
Test Mode :	TX(1Mbps)	Test Voltage :	DC 16.0 V from Adapter AC 120V/60Hz for Adapter
Measurement Distance	3 m	Frenqucy Range	9KHz to 30MHz
RBW/VBW	9KHz~150KHz/RB 200Hz for QP, 150KHz~30MHz/RB 9KHz for QP		

No emission found between lowest internal used/generated frequencies to 30MHz.



### Radiated Emissions Test Data Below 1GHz

EUT:	Reverie 4.1 Bluetooth Speaker	Model Name :	AM-BT-S01
Temperature:	25 °C	Test Data	2015-01-30
Pressure:	1010 hPa	Relative Humidity:	60%
Test Mode :	TX(1Mbps)	Test Voltage :	DC 16.0V from Adapter , AC 120V/60Hz for Adapter
Measurement Distance	3 m	Frenqucy Range	30MHz to 1GHz
RBW/VBW	100KHz / 300KHz for spectrum, RBW=120KHz for receiver.		

(a) Antenna polarization: Horizontal

Frequency (MHz)	Reading Level (dBuV)	Correct Factor (dB)	Measure Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector Type
<b>*58.6126</b>	<b>52.32</b>	<b>-17.02</b>	<b>35.30</b>	<b>40.00</b>	<b>-4.70</b>	<b>QUASPEAK</b>
64.2074	50.14	-17.84	32.30	40.00	-7.70	QUASPEAK
80.3619	47.45	-18.15	29.30	40.00	-10.70	QUASPEAK
191.7450	43.31	-14.62	28.69	43.50	-14.81	QUASPEAK
222.9501	44.35	-13.75	30.60	46.00	-15.40	QUASPEAK
333.6865	41.46	-8.86	32.60	46.00	-13.40	QUASPEAK

(b) Antenna polarization: vertical

Frequency (MHz)	Reading Level (dBuV)	Correct Factor (dB)	Measure Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector Type
59.6492	46.87	-17.84	29.03	40.00	-10.97	QUASPEAK
<b>*79.8002</b>	<b>52.61</b>	<b>-20.21</b>	<b>32.40</b>	<b>40.00</b>	<b>-7.60</b>	<b>QUASPEAK</b>
159.7844	45.33	-17.01	28.32	43.50	-15.18	QUASPEAK
175.6516	45.78	-15.51	30.27	43.50	-13.23	QUASPEAK
228.4903	42.22	-13.12	29.10	46.00	-16.90	QUASPEAK
349.2500	33.14	-8.34	24.80	46.00	-21.20	QUASPEAK

Note: '\*' means the worst case

Measurement Level = Reading Level + Factor

Factor=Ant Factor + Cable Loss-Pre-amplifier.

### Radiated Emissions Test Data Above 1GHz

EUT:	Reverie 4.1 Bluetooth Speaker	Model Name :	AM-BT-S01
Temperature:	25 °C	Test Data	2015-01-30
Pressure:	1010 hPa	Relative Humidity:	60%
Test Mode :	TX(1Mbps)	Test Voltage :	DC 16.0V from Adapter , AC 120V/60Hz for Adapter
Measurement Distance	3 m	Frenqucy Range	1GHz to 25GHz
RBW/VBW	1MHz/1MHz for Peak, 1MHz/10Hz for Average.		

(a) Antenna polarization: Horizontal

Frequency (MHz)	Reading Level (dBuV)	Correct Factor (dB)	Measure Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector Type
2400.000	49.00	-5.70	43.30	74.00	-30.70	PEAK
2400.000	38.62	-5.70	32.92	54.00	-21.08	AVERAGE
4804.000	57.36	5.06	62.42	74.00	-11.58	PEAK
<b>*4804.000</b>	<b>40.35</b>	<b>5.06</b>	<b>45.41</b>	<b>54.00</b>	<b>-8.59</b>	<b>AVERAGE</b>
7206.000	43.23	7.03	50.26	74.00	-23.74	PEAK
7206.000	33.13	7.03	40.16	54.00	-13.84	AVERAGE

(b) Antenna polarization: Vertical

Frequency (MHz)	Reading Level (dBuV)	Correct Factor (dB)	Measure Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector Type
2400.000	52.36	-5.70	46.66	74.00	-27.34	PEAK
2400.000	41.64	-5.70	35.94	54.00	-18.06	AVERAGE
4804.000	57.84	5.06	62.90	74.00	-11.10	PEAK
<b>*4804.000</b>	<b>42.36</b>	<b>5.06</b>	<b>47.42</b>	<b>54.00</b>	<b>-6.58</b>	<b>AVERAGE</b>
7206.000	41.77	7.03	48.80	74.00	-25.20	PEAK
7206.000	31.52	7.03	38.55	54.00	-15.45	AVERAGE

Note: '\*' means the worst case

**8~25GHz at least have 20dB margin. No recording in the test report.**

Measurement Level = Reading Level + Factor

Factor=Ant Factor + Cable Loss-Pre-amplifier.

Low Channel 00: 2402 MHz

Data rate: 1Mbps

(a) Antenna polarization: Horizontal

Frequency (MHz)	Reading Level (dBuV)	Correct Factor (dB)	Measure Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector Type
4880.000	58.59	5.14	63.73	74.00	-10.27	PEAK
<b>*4880.000</b>	<b>42.22</b>	<b>5.14</b>	<b>47.36</b>	<b>54.00</b>	<b>-6.64</b>	<b>AVERAGE</b>
7320.000	39.04	7.52	46.56	74.00	-27.44	PEAK
7320.000	24.18	7.52	31.70	54.00	-22.30	AVERAGE

(b) Antenna polarization: Vertical

Frequency (MHz)	Reading Level (dBuV)	Correct Factor (dB)	Measure Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector Type
4880.000	56.82	5.14	61.96	74.00	-12.04	PEAK
<b>*4880.000</b>	<b>40.28</b>	<b>5.14</b>	<b>45.42</b>	<b>54.00</b>	<b>-8.58</b>	<b>AVERAGE</b>
7320.000	40.54	7.52	48.06	74.00	-25.94	PEAK
7320.000	29.16	7.52	36.68	54.00	-17.32	AVERAGE

Note: '\*' means the worst case

**8~25GHz at least have 20dB margin. No recording in the test report.**

Measurement Level = Reading Level + Factor

Factor=Ant Factor + Cable Loss-Pre-amplifier.

Middle Channel 19: 2440 MHz

Data rate: 1Mbps

(a) Antenna polarization: Horizontal

Frequency (MHz)	Reading Level (dBuV)	Correct Factor (dB)	Measure Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector Type
2483.500	46.33	-4.98	41.35	74.00	-32.65	PEAK
2483.500	32.18	-4.98	27.20	54.00	-26.80	AVERAGE
4960.000	51.01	5.22	56.23	74.00	-17.77	PEAK
<b>*4960.000</b>	<b>36.06</b>	<b>5.22</b>	<b>41.28</b>	<b>54.00</b>	<b>-12.72</b>	<b>AVERAGE</b>
7440.000	37.52	8.06	45.58	74.00	-28.42	PEAK
7440.000	24.44	8.06	32.50	54.00	-21.50	AVERAGE

(b) Antenna polarization: Vertical

Frequency (MHz)	Reading Level (dBuV)	Correct Factor (dB)	Measure Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector Type
2483.500	46.38	-4.98	41.40	74.00	-32.60	PEAK
2483.500	33.46	-4.98	28.48	54.00	-25.52	AVERAGE
4960.000	49.28	5.22	54.50	74.00	-19.50	PEAK
<b>*4960.000</b>	<b>35.05</b>	<b>5.22</b>	<b>40.27</b>	<b>54.00</b>	<b>-13.73</b>	<b>AVERAGE</b>
7440.000	36.65	8.06	44.71	74.00	-29.29	PEAK
7440.000	24.02	8.06	32.08	54.00	-21.92	AVERAGE

Note: '\*' means the worst case

**8~25GHz at least have 20dB margin. No recording in the test report.**

Measurement Level = Reading Level + Factor

Factor=Ant Factor + Cable Loss-Pre-amplifier.

Low Channel 39: 2480 MHz

Data rate: 1Mbps

### 6.2.4 TEST RESULTS (Restricted Bands Requirements)

EUT:	Reverie 4.1 Bluetooth Speaker	Model Name :	AM-BT-S01
Temperature:	25 °C	Test Data	2015-01-30
Pressure:	1010 hPa	Relative Humidity:	60%
Test Mode :	TX(1Mbps)	Test Voltage :	DC 16.0V from Adapter , AC 120V/60Hz for Adapter
Note:	<p>1. The transmitter was setup to transmit at the lowest channel. Then the field strength was measured at 2310-2390 MHz.</p> <p>2. The transmitter was setup to transmit at the highest channel. Then the field strength was measured at 2483.5-2500 MHz.</p>		

Test Mode	Ant.Pol. H/V	Freq. (MHz)	Reading		Ant/CF CF(dB)	Act		Limit	
			Peak (dBuv)	AV (dBuv)		Peak (dBuv/m)	AV (dBuv/m)	Peak (dBuv/m)	AV (dBuv/m)
TX Data rate 1Mbps	H	2390.00	48.72	38.24	-5.79	42.93	32.45	74.00	54.00
	V	2390.00	52.11	40.68	-5.79	46.32	34.89	74.00	54.00
	H	2483.50	46.33	32.18	-4.98	41.35	27.20	74.00	54.00
	V	2483.50	46.38	33.46	-4.98	41.40	28.48	74.00	54.00

Remark:

- (1) Radiated emissions measured in frequency range above 1000MHz were made with an instrument using Peak detector mode.
- (2) During the measurements above 1 GHz it is taken care of that the EUT is always within the 3 dB cone of radiation BW of the used antenna
- (3) Corr.Factor = Antenna Factor + Cable Loss – Pre-amplifier.

## 6.3 Maximum Peak Output Power

### 6.3.1 Applied procedures / Limit

15.247(b) (3) For systems using digital modulation in the 902-928 MHz, 2400-2483.5 MHz, and 5725-5850 MHz bands: 1 Watt. As an alternative to a peak power measurement, compliance with the one Watt limit can be based on a measurement of the maximum conducted output power. Maximum Conducted Output Power is defined as the total transmit power delivered to all antennas and antenna elements averaged across all symbols in the signaling alphabet when the transmitter is operating at its maximum power control level. Power must be summed across all antennas and antenna elements. The average must not include any time intervals during which the transmitter is off or is transmitting at a reduced power level. If multiple modes of operation are possible (e.g., alternative modulation methods), the maximum conducted output power is the highest total transmit power occurring in any mode.

### 6.3.2 Test procedure

- a. The testing follows FCC KDB publication No. 558074 D01 DTS Meas. Guidance v03r02
- b. The EUT was directly connected to the spectrum analyzer and antenna output port as show in the block diagram below.
- c. Spectrum Setting:  $RBW \geq \text{Bandwidth}$ ,  $VBW \geq 3 \times RBW$ , Sweep time = Auto,  $\text{Span} \geq 3 \times RBW$ ,

### 6.3.3 Deviation from standard

No deviation.

### 6.3.4 Test setup



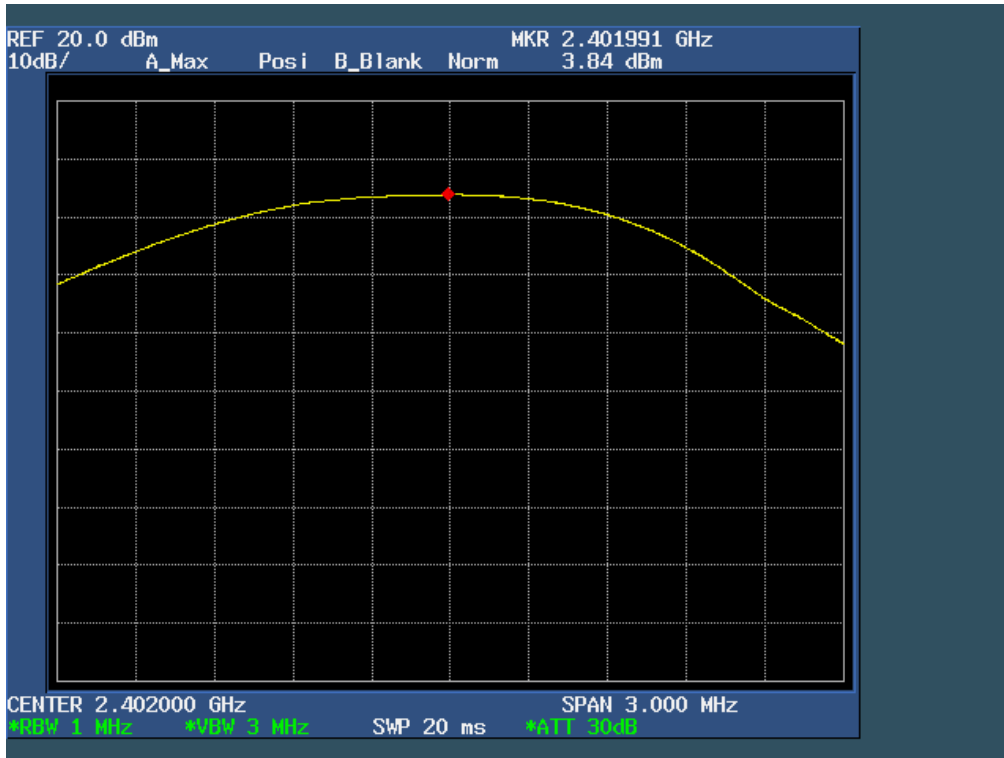
### 6.3.5 Test results

#### The old data:

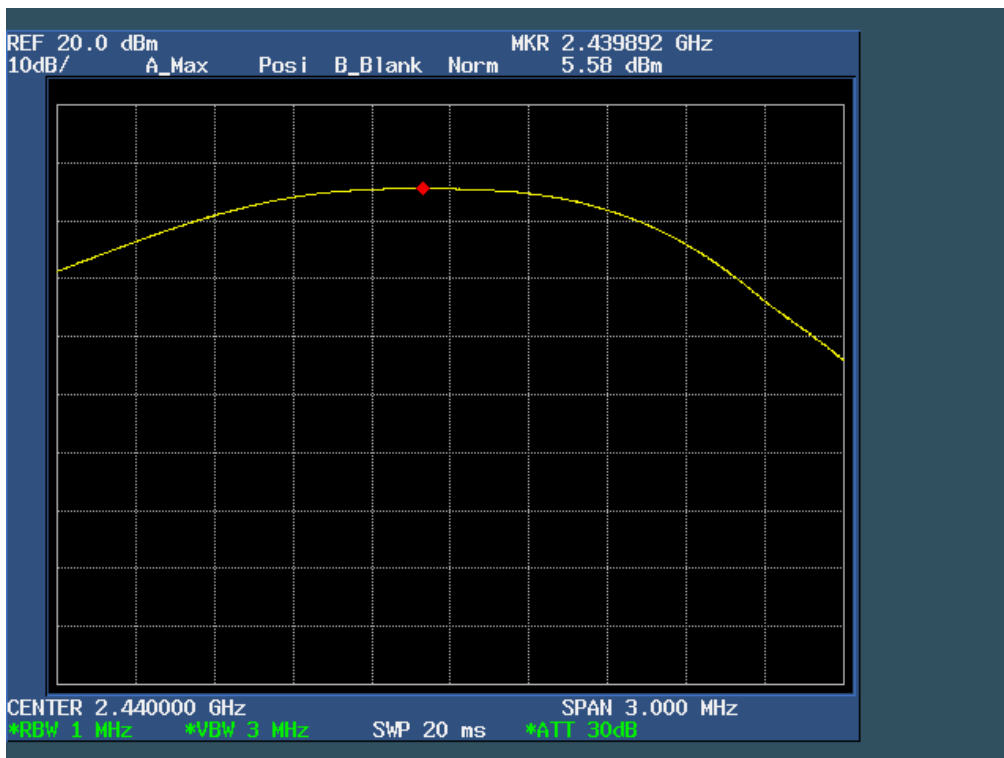
EUT:	Reverie 4.1 Bluetooth Speaker	Model Name :	AM-BT-S01
Temperature:	26 °C	Relative Humidity:	60%
Pressure:	1010 hPa	Test Voltage :	DC 16.0V from Adapter , AC 120V/60Hz for Adapter
Test Mode :	TX (1Mbps)		
Note:1. All the data rates have be tested and the worst-case as the table below.			

Test Mode	Frequency	Reading Power (dBm)	Cable Loss (dB)	Peak Output Power (dBm)	Limit (dBm)	Result
Data rate 1Mbps	2402 MHz	3.84	0.5	4.34	30	Pass
	2440 MHz	5.58	0.5	6.08	30	Pass
	2480 MHz	5.31	0.5	5.81	30	Pass

(1Mbps)  
The Lowest Channel 00: 2402MHz

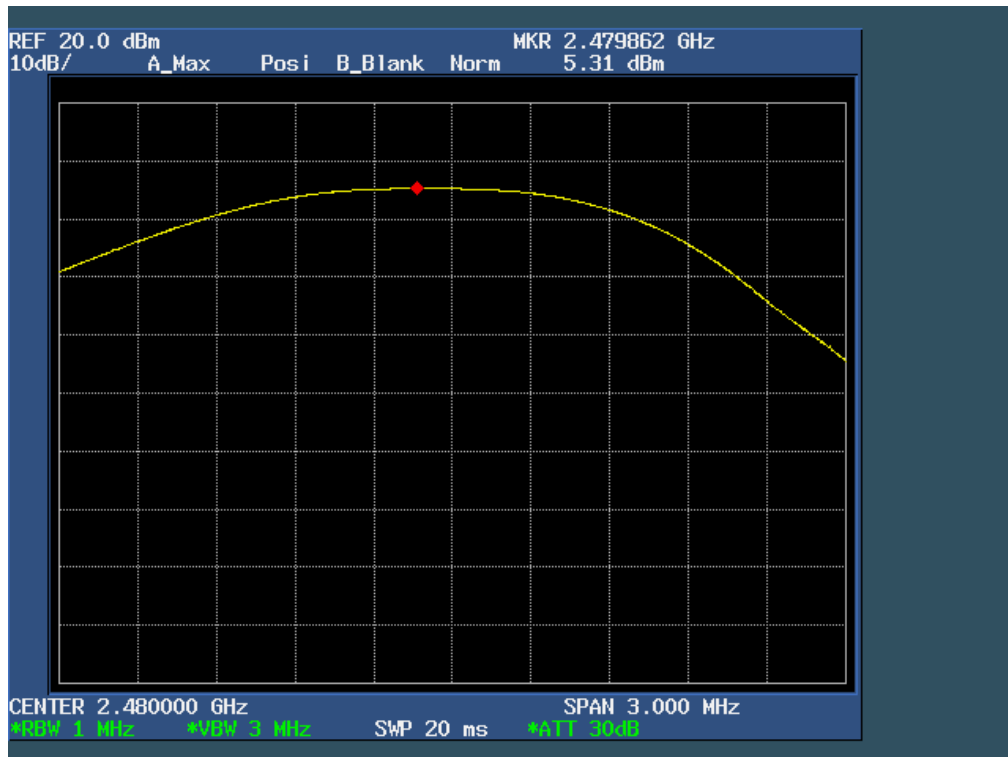


(1Mbps)  
The Middle Channel 19: 2440MHz





(1Mbps)  
The High Channel 39: 2480MHz

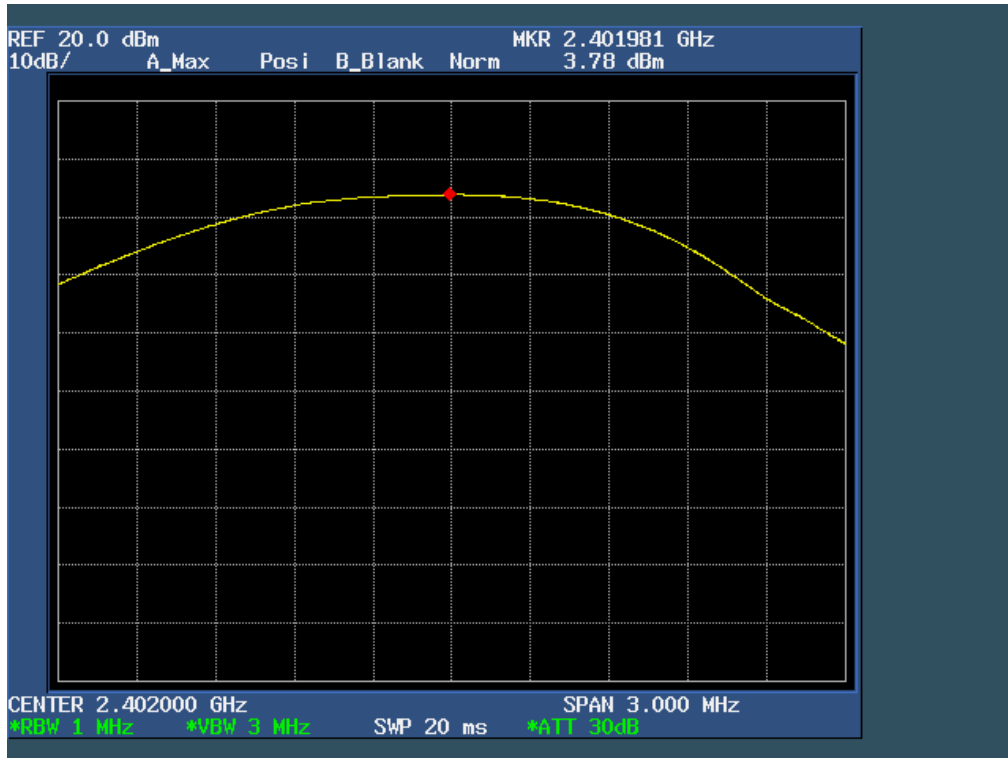


**The new data:**

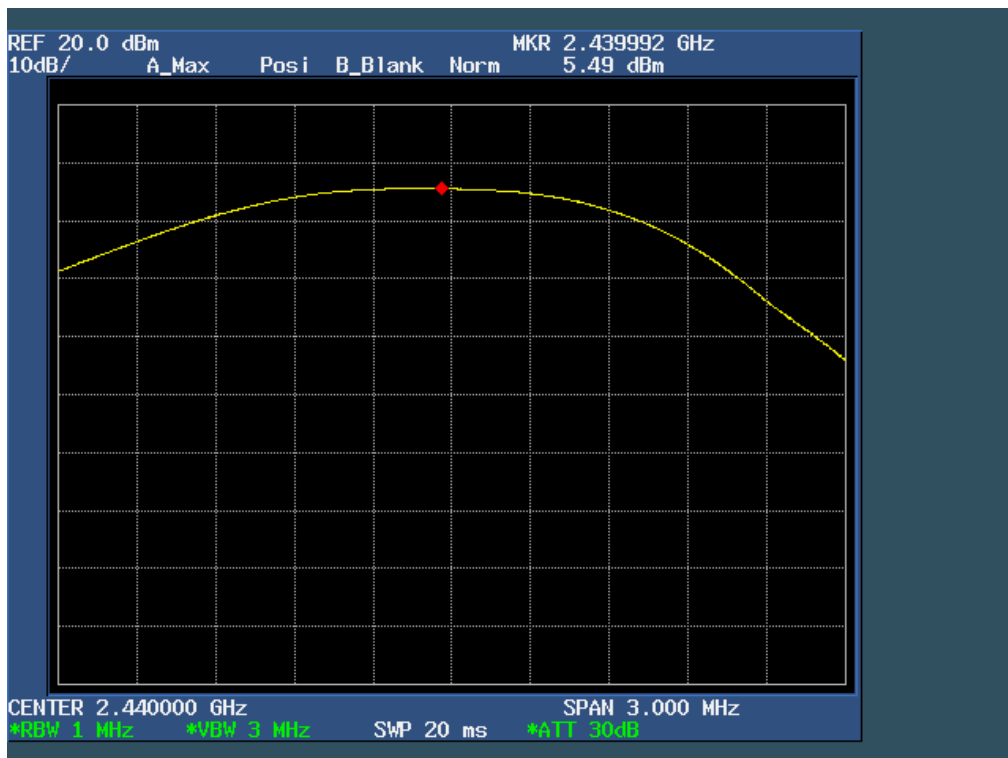
EUT:	Reverie 4.1 Bluetooth Speaker	Model Name :	AM-BT-S01
Temperature:	26 °C	Relative Humidity:	60%
Pressure:	1010 hPa	Test Voltage :	DC 16.0V from Adapter , AC 120V/60Hz for Adapter
Test Mode :	TX (1Mbps)		
Note:1. All the data rates have be tested and the worst-case as the table below.			

Test Mode	Frequency	Reading Power (dBm)	Cable Loss (dB)	Peak Output Power (dBm)	Limit (dBm)	Result
Data rate 1Mbps	2402 MHz	3.78	0.5	4.28	30	Pass
	2440 MHz	5.49	0.5	5.99	30	Pass
	2480 MHz	5.21	0.5	5.71	30	Pass

(1Mbps)  
The Lowest Channel 00: 2402MHz



(1Mbps)  
The Middle Channel 19: 2440MHz



(1Mbps)  
The High Channel 39: 2480MHz

