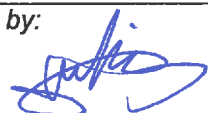


Prüfbericht-Nr.: <i>Test Report No.:</i>	17051302 001	Auftrags-Nr.: <i>Order No.:</i>	164041103	Seite 1 von 32 <i>Page 1 of 32</i>
Kunden-Referenz-Nr.: <i>Client Reference No.:</i>	N/A	Auftragsdatum: <i>Order date.:</i>	15.07.2015	
Auftraggeber: <i>Client:</i>	Hewlett-Packard Company 1501 Page Mill Road, Palo Alto, 94304 California, United States			
Prüfgegenstand: <i>Test item:</i>	HP Wireless Speaker S6500			
Bezeichnung / Typ-Nr.: <i>Identification / Type No.:</i>	BC1101			
Auftrags-Inhalt: <i>Order content:</i>	FCC Certification and Verification			
Prüfgrundlage: <i>Test specification:</i>	CFR47 FCC Part 15: Subpart C Section 15.247 CFR47 FCC Part 15: Subpart C Section 15.207 CFR47 FCC Part 15: Subpart C Section 15.209 CFR47 FCC Part 15: Subpart C Section 15.107 CFR47 FCC Part 15: Subpart C Section 15.109 FCC KDB Publication 447498 D01 v05r02			
Wareneingangsdatum: <i>Date of receipt:</i>	15.07.2015			
Prüfmuster-Nr.: <i>Test sample No.:</i>	A000227425-001 to 003			
Prüfzeitraum: <i>Testing period:</i>	18.07.2015 - 31.08.2015			
Ort der Prüfung: <i>Place of testing:</i>	Accurate Technology Co., Ltd.			
Prüflaboratorium: <i>Testing laboratory:</i>	TÜV Rheinland (Shenzhen) Co., Ltd.			
Prüfergebnis*: <i>Test result*:</i>	Pass			
geprüft von / tested by:		kontrolliert von / reviewed by:		
 10.08.2015 Ryan Yang / Senior Project Engineer		 28.08.2015 Sam Lin / Technical Certifier		
Datum <i>Date</i>	Name/Stellung <i>Name/Position</i>	Unterschrift <i>Signature</i>	Datum <i>Date</i>	Name/Stellung <i>Name/Position</i>
Sonstiges / Other:				
This test report is for approval of 2.4G band operation. FCC ID: B94DHDBC1101				
Zustand des Prüfgegenstandes bei Anlieferung: <i>Condition of the test item at delivery:</i>		Prüfmuster vollständig und unbeschädigt <i>Test item complete and undamaged:</i>		
* Legende:	1 = sehr gut	2 = gut	3 = befriedigend	4 = ausreichend
	P(ass) = entspricht o.g. Prüfgrundlage(n)	F(ail) = entspricht nicht o.g. Prüfgrundlage(n)	N/A = nicht anwendbar	5 = mangelhaft
Legend:	1 = very good	2 = good	3 = satisfactory	N/T = nicht getestet
	P(ass) = passed a.m. test specifications(s)	F(ail) = failed a.m. test specifications(s)	4 = sufficient	5 = poor
			N/A = not applicable	N/T = not tested
Dieser Prüfbericht bezieht sich nur auf das o.g. Prüfmuster und darf ohne Genehmigung der Prüfstelle auszugsweise vervielfältigt werden. Dieser Bericht berechtigt nicht zur Verwendung eines <i>This test report only relates to the a. m. test sample. Without permission of the test center this test report is not permitted to be duplicated in extracts. This test report does not entitle to carry any test mark.</i>				

V04

Test Summary

5.1.1 ANTENNA REQUIREMENT*RESULT: Pass***5.1.2 PEAK CONDUCTED OUTPUT POWER***RESULT: Pass***5.1.3 CONDUCTED SPURIOUS EMISSIONS MEASURED IN 100 kHz BANDWIDTH***RESULT: Pass***5.1.4 RADIATED SPURIOUS EMISSION***RESULT: Pass***5.1.5 20dB BANDWIDTH***RESULT: Pass***5.1.6 CARRIER FREQUENCY SEPARATION***RESULT: Pass***5.1.7 NUMBER OF HOPPING FREQUENCY***RESULT: Pass***5.1.8 TIME OF OCCUPANCY***RESULT: Pass***5.1.9 CONDUCTED EMISSIONS***RESULT: Pass***5.1.10 RADIATED EMISSION***RESULT: Pass***6.1.1 ELECTROMAGNETIC FIELDS***RESULT: Pass*

Contents

1	GENERAL REMARKS	5
1.1	COMPLEMENTARY MATERIALS	5
2	TEST SITES	5
2.1	TEST FACILITIES	5
2.2	LIST OF TEST AND MEASUREMENT INSTRUMENTS	6
2.3	TRACEABILITY.....	7
2.4	CALIBRATION.....	7
2.5	MEASUREMENT UNCERTAINTY.....	7
2.6	LOCATION OF ORIGINAL DATA.....	7
2.7	STATUS OF FACILITY USED FOR TESTING.....	7
3	GENERAL PRODUCT INFORMATION.....	8
3.1	PRODUCT FUNCTION AND INTENDED USE.....	8
3.2	RATINGS AND SYSTEM DETAILS	8
3.3	INDEPENDENT OPERATION MODES	11
3.4	NOISE GENERATING AND NOISE SUPPRESSING PARTS	11
3.5	SUBMITTED DOCUMENTS	11
4	TEST SET-UP AND OPERATION MODES.....	12
4.1	PRINCIPLE OF CONFIGURATION SELECTION.....	12
4.2	TEST OPERATION AND TEST SOFTWARE	12
4.3	SPECIAL ACCESSORIES AND AUXILIARY EQUIPMENT	12
4.4	COUNTERMEASURES TO ACHIEVE EMC COMPLIANCE	12
4.5	TEST SETUP DIAGRAM.....	13
5	TEST RESULTS	15
5.1	TRANSMITTER REQUIREMENT & TEST SUITES	15
5.1.1	<i>Antenna Requirement.....</i>	<i>15</i>
5.1.2	<i>Peak Conducted Output Power.....</i>	<i>16</i>
5.1.3	<i>Conducted Spurious Emissions Measured in 100 kHz Bandwidth</i>	<i>18</i>
5.1.4	<i>Radiated Spurious Emission.....</i>	<i>19</i>
5.1.5	<i>20dB Bandwidth.....</i>	<i>20</i>
5.1.6	<i>Carrier Frequency Separation</i>	<i>21</i>
5.1.7	<i>Number of Hopping Frequency</i>	<i>22</i>
5.1.8	<i>Time of Occupancy</i>	<i>23</i>
5.1.9	<i>Conducted Emissions</i>	<i>25</i>
5.1.10	<i>Radiated Emission.....</i>	<i>26</i>
6	SAFETY HUMAN EXPOSURE.....	27

6.1	RADIO FREQUENCY EXPOSURE COMPLIANCE	27
6.1.1	Electromagnetic Fields	27
7	PHOTOGRAPHS OF THE TEST SET-UP	28
8	LIST OF TABLES.....	32
9	LIST OF PHOTOGRAPHS	32

1 General Remarks

1.1 Complementary Materials

All attachments are integral parts of this test report. This applies especially to the following appendix:

Appendix 1: Test result

2 Test Sites

2.1 Test Facilities

Accurate Technology Co., Ltd.

F1, Bldg. A, Changyuan New Material Port Keyuan Rd., Science & Industry Park, Nanshan Shenzhen,
P.R. China

FCC Registration No.: 752051

Test site Industry Canada No.: 5077A-2

The tests at the test sites have been conducted under the supervision of a TÜV engineer.

2.2 List of Test and Measurement Instruments

Table 1: List of Test and Measurement Equipment
Accurate Technology Co., Ltd.

Radio Spectrum Test				
Equipment	Manufacturer	Model No.	Serial No.	Cal. Until
Spectrum Analyzer	R&S	ESPI3	100396/003	09.01.2016
Spectrum Analyzer	Agilent	E7405A	MY45115511	09.01.2016
Temp. & Humid. Chamber	Gongwen	HSD-500	0109	09.01.2016
Conducted Emissions				
Equipment	Manufacturer	Model No.	Serial No.	Cal. Until
Test Receiver	R&S	ESCS30	100307	09.01.2016
L.I.S.N.	Schwarzbeck	NLSK8126	8126431	09.01.2016
Pulse Limiter	R&S	ESH3-Z2	100815	09.01.2016
50_ Coaxial Switch	Anritsu Corp	MP59B	6200283933	09.01.2016
Radiated Emission & Spurious Emission				
Equipment	Manufacturer	Model No.	Serial No.	Cal. Until
Spectrum Analyzer	R&S	FSV40	101495	01.01.2016
Test Receiver	R&S	ESCS30	100307	01.01.2016
Bilog Antenna	Schwarzbeck	VULB9163	9163-323	01.01.2016
Loop Antenna	Schwarzbeck	FMZB1516	1516131	01.01.2016
Horn Antenna	Schwarzbeck	BBHA9120D	9120D-655	01.01.2016
Horn Antenna	Schwarzbeck	BBHA9170	9170-359	01.01.2016
RF Switching Unit+PreAMP	Compliance Direction	RSU-M2	38322	01.01.2016
Pre-Amplifier	R&S	CBLU11835 40-01	3791	01.01.2016
50 Coaxial Switch	Anritsu Corp	MP59B	6200506474	01.01.2016
RF Coaxial Cable	SUHNER	N-3m	No.8	01.01.2016
RF Coaxial Cable	RESENBERGER	N-3.5m	No.9	01.01.2016
RF Coaxial Cable	SUHNER	N-6m	No.10	01.01.2016
RF Coaxial Cable	RESENBERGER	N-12m	No.11	01.01.2016
50_ Coaxial Switch	Anritsu Corp	MP59B	6200283933	09.01.2016

2.3 Traceability

All measurement equipment calibrations are traceable to NIM (National Institute of Metrology) or where calibration is performed in other countries, to equivalent nationally recognized standards organizations.

2.4 Calibration

Equipment requiring calibration is calibrated periodically by the manufacturer or according to manufacturer's specifications. Additionally all equipment is verified for proper performance on a regular basis using in house standards or comparisons.

2.5 Measurement Uncertainty

Parameter	Uncertainty
Radio Spectrum	± 0.60 dB
All emission, radiated	± 4.42 dB
Conducted Emission	± 2.23 dB
Radiated Emission	± 4.42 dB

2.6 Location of Original Data

The original copies of all test data taken during actual testing were attached at Appendix1 of this report and delivered to the applicant. A copy has been retained in the TÜV Rheinland (Shenzhen) file for certification follow-up purposes.

2.7 Status of Facility Used for Testing

Accurate Technology Co., Ltd. Test facility located at F1, Bldg. A, Changyuan New Material Port, Keyuan Rd., Science & Industry Park Nanshan District, Shenzhen 518057, P.R. China is listed on the US Federal Communications Commission list of facilities approved to perform measurements.

3 General Product Information

3.1 Product Function and Intended Use

The EUT is a wireless speaker with Bluetooth wireless technology.

Refer to User Manual and Circuit Diagram for further details.

3.2 Ratings and System Details

Table 2: Technical Specification of EUT

Technical Specification	Value
Product Name	HP Wireless Speaker S6500
Model Number	BC1101
Operating Frequency	2402-2480MHz
Channel separation	1MHz
Extreme Temperature Range	-20°C ~ +55°C
Operation Voltage	DC 3.7V via Internal rechargeable lithium battery
	DC 5.0V via USB port
Modulation	GFSK, $\pi/4$ DQPSK, 8DPSK
Bluetooth Version	Bluetooth 2.1+ EDR
Antenna Type and Gain	PCB Antenna, 0dBi

Table 3: RF Channel and Frequency of Bluetooth

RF Channel	Frequency (MHz)	RF Channel	Frequency (MHz)	RF Channel	Frequency (MHz)	RF Channel	Frequency (MHz)
00	2402.00	20	2422.00	40	2442.00	60	2462.00
01	2403.00	21	2423.00	41	2443.00	61	2463.00
02	2404.00	22	2424.00	42	2444.00	62	2464.00
03	2405.00	23	2425.00	43	2445.00	63	2465.00
04	2406.00	24	2426.00	44	2446.00	64	2466.00
05	2407.00	25	2427.00	45	2447.00	65	2467.00
06	2408.00	26	2428.00	46	2448.00	66	2468.00
07	2409.00	27	2429.00	47	2449.00	67	2469.00
08	2410.00	28	2430.00	48	2450.00	68	2470.00
09	2411.00	29	2431.00	49	2451.00	69	2471.00
10	2412.00	30	2432.00	50	2452.00	70	2472.00
11	2413.00	31	2433.00	51	2453.00	71	2473.00
12	2414.00	32	2434.00	52	2454.00	72	2474.00
13	2415.00	33	2435.00	53	2455.00	73	2475.00
14	2416.00	34	2436.00	54	2456.00	74	2476.00
15	2417.00	35	2437.00	55	2457.00	75	2477.00
16	2418.00	36	2438.00	56	2458.00	76	2478.00
17	2419.00	37	2439.00	57	2459.00	77	2479.00
18	2420.00	38	2440.00	58	2460.00	78	2480.00
19	2421.00	39	2441.00	59	2461.00	/	/

Table 4: Frequency Hopping Information

Technical Specification	Description
Hopping Range	Hereby we declare that the maximum frequency of this device is: 2402-2480MHz. This is according the Bluetooth Core Specification V2.1+EDR for devices which will be operated in the USA. This was checked during the Bluetooth Qualification tests (Test Case: TRM/CA/04-E).
Hopping Sequence	Example of a 79 hopping sequence in data mode: 33,04,21,44,23,42,53,46,55,48,40,59,72,29,76,31,08,73,07,75,09,45,60,39,58,13,47,11,77,52,35,50,65,54,67,56,69,62,71,64, 7,25,27,66,57,70,74,61,78,63,10,41,05,43,15,44,64,68,02,70,06,01,51,03,55,05,03,66,53,49,36,47,
Receiver input bandwidth	The input bandwidth of the receiver is 1MHz. In every connection one Bluetooth device is the master and the other one is the slave. The master determines the hopping sequence. The slave follows this sequence. Both devices shift between RX and TX time slot according to the clock of the master. Additionally the type of connection is set up at the beginning of the connection. The master adapts its hopping frequency and its TX/RX timing according to the packet type of the connection. Also the slave of the connection will use these settings. Repeating of a packer has no influence on the hopping sequence. The hopping sequence generated by the master of the connection will be followed in any case. That means a repeated packet will not be send on the same frequency, it is send on the next frequency of the hopping sequence.

3.3 Independent Operation Modes

The basic operation modes are:

- A. Bluetooth transmitting (BDR & EDR mode)
 - 1. Low Channel
 - 2. Middle Channel
 - 3. High Channel
- B. Transmitting on hopping channel
- C. Bluetooth receiving
- D. AUX IN
- E. Charging
- F. Off

3.4 Noise Generating and Noise Suppressing Parts

Refer to Circuit Diagram for further details.

3.5 Submitted Documents

- | | |
|-------------------------|--------------------------|
| - Bill of Material | - Block Diagram |
| - Circuit Diagram | - FCC Label and Location |
| - Operation Description | - Photo Document |
| - User Manual | |

4 Test Set-up and Operation Modes

4.1 Principle of Configuration Selection

The equipment under test (EUT) was configured to measure its maximum power level.

The test modes were adapted accordingly in reference to the instructions for use.

4.2 Test Operation and Test Software

Test operation refers to test setup in chapter 5. All testing were performed according to the procedures in ANSI C63.10: 2013 & ANSI C63.4: 2014

4.3 Special Accessories and Auxiliary Equipment

The EUT was tested together with the following accessories:

Description	Manufacturer	Part No.	S/N
Mobile phone	HUAWEI	P7-L00	7NZMYN151S027984
Notebook	Lenovo	ThinkPad X240	N/A

4.4 Countermeasures to Achieve EMC Compliance

The test sample, which has been tested, contained the noise suppression parts as described in the Constructional Data Form or the Technical Construction File.

No additional measures were employed to achieve compliance.

4.5 Test Setup Diagram

Diagram of Measurement Configuration for Radiation Test (Below 1GHz)

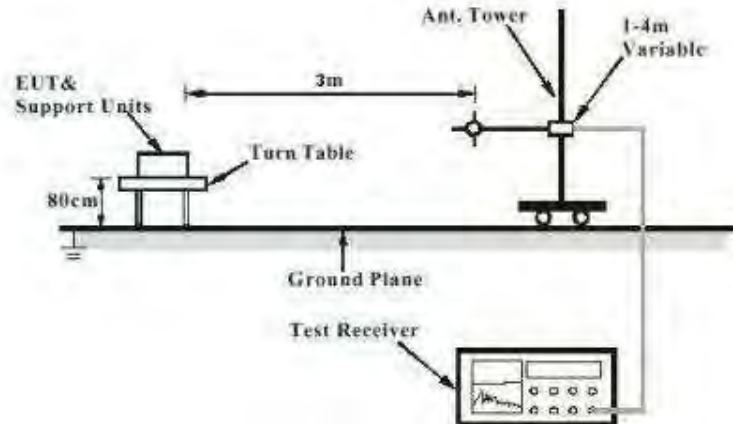


Diagram of Measurement Configuration for Radiation Test (Above 1GHz)

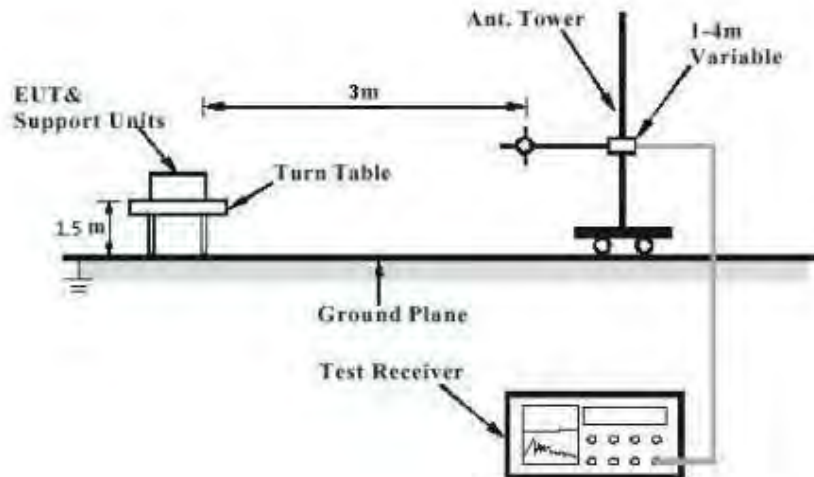


Diagram of Measurement Configuration for Mains Conduction Measurement

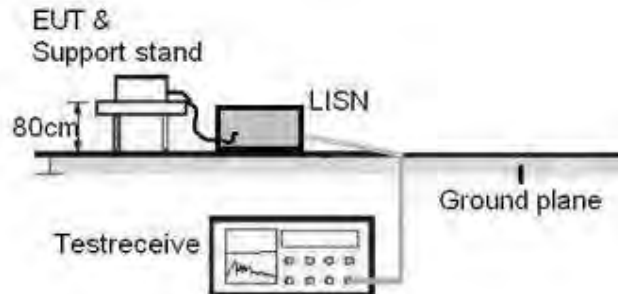


Diagram of Measurement Configuration for Conducted Transmitter Measurement



5 Test Results

5.1 Transmitter Requirement & Test Suites

5.1.1 Antenna Requirement

RESULT: **Pass**

Test Specification

Test standard	: FCC Part 15.247(b)(4) and Part 15.203
Limits	: the use of antennas with directional gains that do not exceed 6dBi

According to the manufacturer declared, the EUT has an internal antenna, the directional gain of antenna is 0 dBi, and the antenna connector is designed with permanent attachment and no consideration of replacement. Therefore the EUT is considered sufficient to comply with the provision.

Therefore the EUT is considered sufficient to comply with the provision.

Refer to EUT Photo for further details.

5.1.2 Peak Conducted Output Power**RESULT:****Pass****Test Specification**

Test standard : FCC Part 15.247(b)(1)
Basic standard : ANSI C63.10: 2013
Limits : 0.125 Watts
Kind of test site : Shielded Room

Test Setup

Date of testing : 30.07.2015
Input voltage : DC 3.7V via Internal rechargeable lithium battery
Operation mode : A
Test channel : Low / Middle/ High
Ambient temperature : 25°C
Relative humidity : 56%
Atmospheric pressure : 101 kPa

Table 5: Test Result of Peak Conducted Output Power, BDR

Channel	Channel Frequency (MHz)	Peak Output Power		Limit
		(dBm)	(W)	(W)
Low Channel	2402	-0.65	0.00086	0.125
Middle Channel	2441	-0.92	0.00081	0.125
High Channel	2480	-1.41	0.00072	0.125

Remark: RBW is 1MHz

Table 6: Test Result of Peak Conducted Output Power, EDR

Channel	Channel Frequency (MHz)	Peak Output Power		Limit
		(dBm)	(W)	(W)
Low Channel	2402	-0.43	0.00091	0.125
Middle Channel	2441	-0.75	0.00084	0.125
High Channel	2480	-1.21	0.00076	0.125

Remark: RBW is 3MHz

For the measurement records, refer to following test plot:

5.1.3 Conducted Spurious Emissions Measured in 100 kHz Bandwidth**RESULT:****Pass****Test Specification**

Test standard	: FCC Part 15.247(d)
Basic standard	: ANSI C63.10: 2013
Limits	: 20dB (below that in the 100kHz bandwidth within the band that contains the highest level of the desired power); In addition, radiated emissions which fall in the restricted bands, must also comply with the radiated emission limits specified in 15.209(a)
Kind of test site	: Shielded Room

Test Setup

Date of testing	: 30.07.2015
Input voltage	: DC 3.7V via Internal rechargeable lithium battery
Operation mode	: A
Test channel	: Low / Middle/ High
Ambient temperature	: 25°C
Relative humidity	: 56%
Atmospheric pressure	: 101 kPa

All emissions are more than 20dB below fundamental, compliance is achieved as well.

For the measurement records, refer to the appendix 1.

5.1.4 Radiated Spurious Emission

RESULT:**Pass****Test Specification**

Test standard	: FCC Part 15.247(d), FCC Part 15.205
Basic standard	: ANSI C63.10: 2013
Limits	: Refer to 15.209(a) of FCC part 15.247(d)
Kind of test site	: 3m Semi-anechoic chamber

Test Setup

Date of testing	: 21.07.2015 to 31.07.2015
Input voltage	: DC 3.7V via Internal rechargeable lithium battery
Operation mode	: A
Test channel	: Low / Middle/ High
Ambient temperature	: 25°C
Relative humidity	: 56%
Atmospheric pressure	: 101 kPa

Remark:

During the pretest the EUT was rotated through three orthogonal axes to determine the attitude that maximizes the emissions. After that the EUT was manually handled to find the orientation that has the maximum emission, which is the orientation shown in the test set-up photos.

Pre-test the EUT in continuous transmitting mode at the low (2402 MHz), middle (2441 MHz) and high (2480 MHz) channel with different data packet. Compliance test in continuous transmitting mode with BDR mode (DH5) as the worst case was found.

Testing was carried out within frequency range 9kHz to the tenth harmonics.

For the measurement records, refer to the appendix 1.

5.1.5 20dB Bandwidth

RESULT:

Pass

Test Specification

Test standard : FCC Part 15.247(a)(1)
Basic standard : ANSI C63.10: 2013
Kind of test site : Shielded Room

Test Setup

Date of testing : 30.07.2015
Input voltage : DC 3.7V via Internal rechargeable lithium battery
Operation mode : A
Test channel : Low / Middle/ High
Ambient temperature : 25°C
Relative humidity : 56%
Atmospheric pressure : 101 kPa

Table 7: Test Result of 20dB Bandwidth, BDR mode

Channel	Channel Frequency (MHz)	20dB Bandwidth (kHz)	2/3 of 20dB Bandwidth (kHz)	Limit (MHz)	Result
Low Channel	2402	651.2	434.133	/	Pass
Middle Channel	2441	659.9	439.933	/	Pass
High Channel	2480	681.6	454.400	/	Pass

Table 8: Test Result of 20dB Bandwidth, EDR mode

Channel	Channel Frequency (MHz)	20dB Bandwidth (kHz)	2/3 of 20dB Bandwidth (kHz)	Limit (MHz)	Result
Low Channel	2402	1198.2	798.800	/	Pass
Middle Channel	2441	1185.2	790.133	/	Pass
High Channel	2480	1198.3	798.867	/	Pass

5.1.6 Carrier Frequency Separation

RESULT:

Pass

Test Specification

Test standard	: FCC Part 15.247(a)(1)
Basic standard	: ANSI C63.10: 2013
Limits	: $\geq 25\text{kHz}$ or $2/3$ of 20dB bandwidth, whichever is greater
Kind of test site	: Shielded Room

Test Setup

Date of testing	: 30.07.2015
Input voltage	: DC 3.7V via Internal rechargeable lithium battery
Operation mode	: B.
Test channel	: Low / Middle/ High
Ambient temperature	: 25°C
Relative humidity	: 56%
Atmospheric pressure	: 101 kPa

Table 9: Test Result of Carrier Frequency Separation

Channel	Channel Frequency (MHz)	Measured Channel Separation (KHz)	Limit (kHz)	Result
Low Channel	2402	1000.0	≥ 25kHz or 2/3 of 20dB bandwidth	Pass
Adjacency Channel	2403			
Middle Channel	2441	1000.0		Pass
Adjacency Channel	2442			
High Channel	2480	1000.0		Pass
Adjacency Channel	2479			

Note:

The limit is maximum $2/3$ of the 20 dB bandwidth: 798.867 KHz .

5.1.7 Number of Hopping Frequency

RESULT:

Pass

Test Specification

Test standard : FCC part 15.247(a)(1)(iii)
Basic standard : ANSI C63.10: 2013
Limits : ≥ 15 non-overlapping channels
Kind of test site : Shielded Room

Test Setup

Date of testing : 30.07.2015
Input voltage : DC 3.7V via Internal rechargeable lithium battery
Operation mode : B
Ambient temperature : 25°C
Relative humidity : 56%
Atmospheric pressure : 101 kPa

Table 10: Test Result of Number of Hopping Frequency

Frequency Range	Measured Quantity of Hopping Channel	Limit	Result
2402 to 2480 MHz	79	≥ 15	Pass

5.1.8 Time of Occupancy**RESULT:****Pass****Test Specification**

Test standard : FCC part 15.247(a)(1)(iii)
Basic standard : ANSI C63.10: 2013
Limits : 0.4s
Kind of test site : Shielded Room

Test Setup

Date of testing : 30.07.2015
Input voltage : DC 3.7V via Internal rechargeable lithium battery
Test channel : Low / Middle/ High
Operation mode : A.
Ambient temperature : 25°C
Relative humidity : 56%
Atmospheric pressure : 101 kPa

Table 11: Test Result of Time of Occupancy, BDR mode

Channel	Data Mode	Pulse width (ms)	Measured Dwell time(s)	Limit (s)	Result
Low Channel	1DH1	0.42	0.134	0.4	Pass
	1DH3	1.84	0.294	0.4	Pass
	1DH5	2.91	0.310	0.4	Pass
Middle Channel	1DH1	0.44	0.141	0.4	Pass
	1DH3	1.84	0.294	0.4	Pass
	1DH5	2.93	0.313	0.4	Pass
High Channel	1DH1	0.42	0.134	0.4	Pass
	1DH3	1.86	0.298	0.4	Pass
	1DH5	2.96	0.316	0.4	Pass

Table 12: Test Result of Time of Occupancy, EDR mode

Channel	Data Mode	Pulse width (ms)	Measured Dwell time (s)	Limit (s)	Result
Low Channel	3DH1	0.43	0.138	0.4	Pass
	3DH3	1.84	0.294	0.4	Pass
	3DH5	2.93	0.313	0.4	Pass
Middle Channel	3DH1	0.41	0.131	0.4	Pass
	3DH3	1.90	0.304	0.4	Pass
	3DH5	2.93	0.313	0.4	Pass
High Channel	3DH1	0.43	0.138	0.4	Pass
	3DH3	1.84	0.294	0.4	Pass
	3DH5	3.10	0.331	0.4	Pass

Note:

Dwell time = Pulse width x (Hopping rate / Number of channels) x Period

Period = 0.4 (seconds/ channel) x 79 (channel) = 31.6 seconds

5.1.9 Conducted Emissions

RESULT:**Pass****Test Specification**

Test standard	: FCC Part 15.207(a) & FCC Part 15.107(a)
Basic standard	: ANSI C63.10: 2013 & ANSI C63.4: 2014
Frequency range	: 0.15 – 30MHz
Limits	: FCC Part 15.207(a) & FCC Part 15.107(a)
Kind of test site	: Shielded Room

Test Setup

Date of testing	: 31.07.2015
Input voltage	: AC 120V, 60Hz via AC input of Notebook
Operation mode	: C, D, E
Earthing	: Not connected
Ambient temperature	: 25°C
Relative humidity	: 56%
Atmospheric pressure	: 101 kPa

For the measurement records, refer to the appendix 1.

5.1.10 Radiated Emission**RESULT:****Pass****Test Specification**

Test standard	: FCC Part 15.109(a)
Basic standard	: ANSI C63.4: 2014
Frequency range	: 30 - 6000MHz
Classification	: Class B
Limits	: FCC Part 15.109(a)
Kind of test site	: 3m Semi-anechoic chamber

Test Setup

Date of testing	: 18.07.2015 to 31.07.2015
Input voltage	: AC 120V, 60Hz via AC input of Notebook
Operation mode	: C, D, E
Earthing	: Not connected
Ambient temperature	: Refer to Appendix 1
Relative humidity	: Refer to Appendix 1
Atmospheric pressure	: Refer to Appendix 1

For the measurement records, refer to the appendix 1.

6 Safety Human Exposure

6.1 Radio Frequency Exposure Compliance

6.1.1 Electromagnetic Fields

RESULT:**Pass****Test Specification**

Test standard : FCC KDB Publication 447498 v05r02

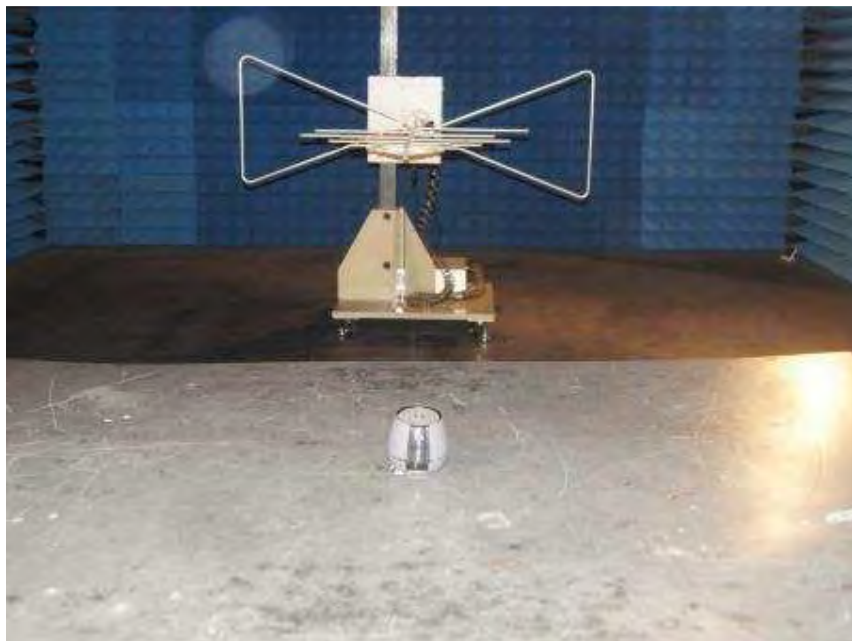
The minimum distance for the EUT is 5mm, since maximum peak output power of the transmitter is 0.91 mW <10 mW, hence the EUT is excluded from SAR evaluation according to FCC KDB Publication 447498 D01 General RF Exposure Guidance v05r02

7 Photographs of the Test Set-Up

Photograph 1: Set-up for Radiated Spurious Emissions (9kHz - 30MHz)



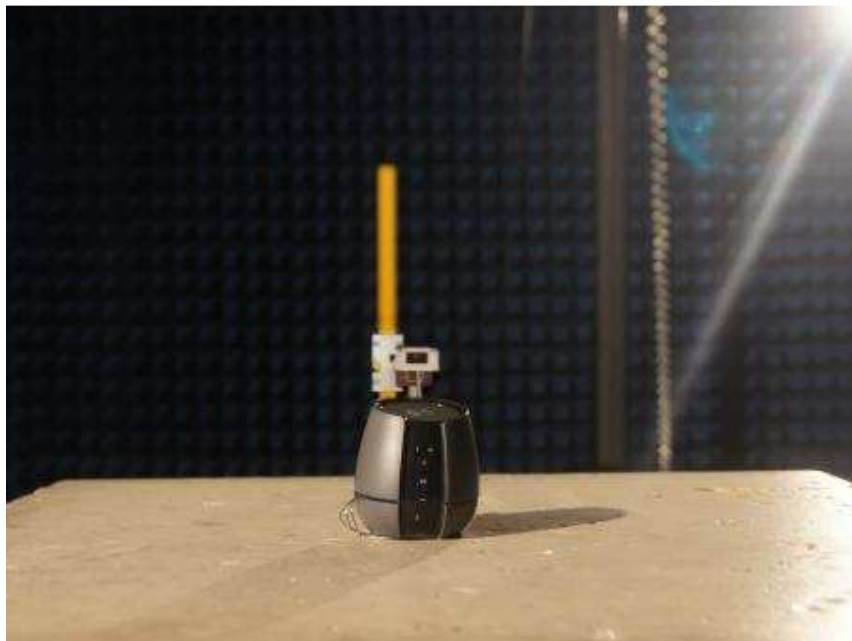
Photograph 2: Set-up for Radiated Spurious Emissions (30MHz-1GHz)



Photograph 3: Set-up for Radiated Spurious Emissions (1GHz ~ 18GHz)



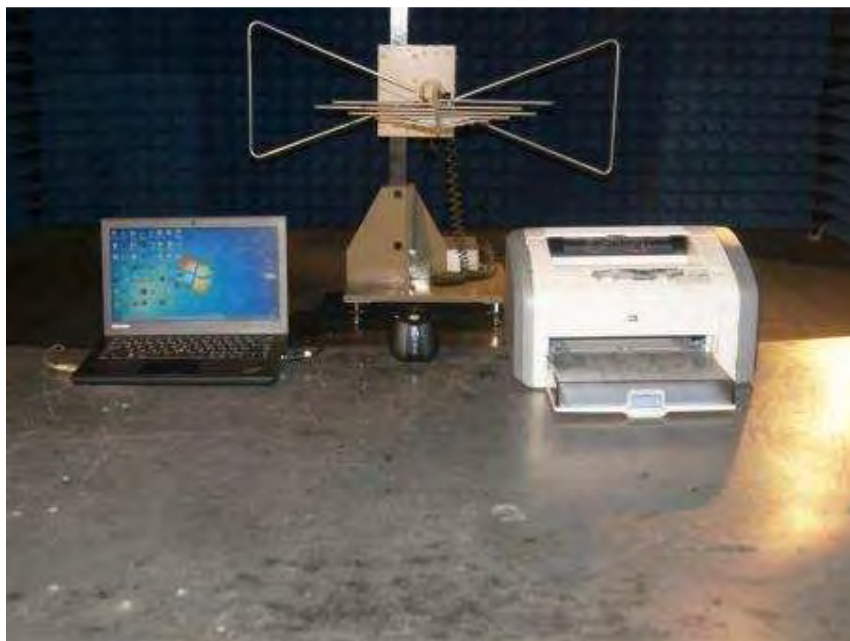
Photograph 4: Set-up for Radiated Spurious Emissions (18GHz ~ 26GHz)



Photograph 5: Set-up for Conducted Emissions



Photograph 6: Set-up for Radiated Emission (Below 1GHz)



Photograph 7: Set-up for Radiated Emission (Above 1GHz)



8 List of Tables

Table 1: List of Test and Measurement Equipment.....	6
Table 2: Technical Specification of EUT	8
Table 3: RF Channel and Frequency of Bluetooth	9
Table 4: Frequency Hopping Information.....	10
Table 5: Test Result of Peak Conducted Output Power, BDR	17
Table 6: Test Result of Peak Conducted Output Power, EDR	17
Table 7: Test Result of 20dB Bandwidth, BDR mode.....	20
Table 8: Test Result of 20dB Bandwidth, EDR mode.....	20
Table 9: Test Result of Carrier Frequency Separation	21
Table 10: Test Result of Number of Hopping Frequency	22
Table 11: Test Result of Time of Occupancy, BDR mode.....	24
Table 12: Test Result of Time of Occupancy, EDR mode.....	24

9 List of Photographs

Photograph 1: Set-up for Radiated Spurious Emissions (9kHz - 30MHz).....	28
Photograph 2: Set-up for Radiated Spurious Emissions (30MHz-1GHz).....	28
Photograph 3: Set-up for Radiated Spurious Emissions (1GHz ~ 18GHz)	29
Photograph 4: Set-up for Radiated Spurious Emissions (18GHz ~ 26GHz)	29
Photograph 5: Set-up for Conducted Emissions	30
Photograph 6: Set-up for Radiated Emission (Below 1GHz)	30
Photograph 7: Set-up for Radiated Emission (Above 1GHz).....	31

List of Figures

Figure 1: Test figure of spurious emissions, mode A.1, Horizontal polarity (9kHz – 30MHz)	2
Figure 2: Test figure of spurious emissions, mode A.1, Vertical polarity (9kHz – 30MHz)	3
Figure 3: Test figure of spurious emissions, mode A.1, Horizontal polarity (30MHz – 1GHz)	4
Figure 4: Test figure of spurious emissions, mode A.1, Vertical polarity (30MHz – 1GHz)	5
Figure 5: Test figure of spurious emissions, mode A.1, Horizontal polarity (1GHz – 18GHz)	6
Figure 6: Test figure of spurious emissions, mode A.1, Vertical polarity (1GHz – 18GHz)	7
Figure 7: Test figure of spurious emissions, mode A.1, Horizontal polarity (18GHz – 25GHz)	8
Figure 8: Test figure of spurious emissions, mode A.1, Vertical polarity (18GHz – 25GHz)	9
Figure 9: Test figure of spurious emissions, mode A.2, Horizontal polarity (9kHz – 30MHz)	10
Figure 10: Test figure of spurious emissions, mode A.2, Vertical polarity (9kHz – 30MHz)	11
Figure 11: Test figure of spurious emissions, mode A.2, Horizontal polarity (30MHz – 1GHz)	12
Figure 12: Test figure of spurious emissions, mode A.2, Vertical polarity (30MHz – 1GHz)	13
Figure 13: Test figure of spurious emissions, mode A.2, Horizontal polarity (1GHz – 18GHz)	14
Figure 14: Test figure of spurious emissions, mode A.2, Vertical polarity (1GHz – 18GHz)	15
Figure 15: Test figure of spurious emissions, mode A.2, Horizontal polarity (18GHz – 25GHz)	16
Figure 16: Test figure of spurious emissions, mode A.2, Vertical polarity (18GHz – 25GHz)	17
Figure 17: Test figure of spurious emissions, mode A.3, Horizontal polarity (9kHz – 30MHz)	18
Figure 18: Test figure of spurious emissions, mode A.3, Vertical polarity (9kHz – 30MHz)	19
Figure 19: Test figure of spurious emissions, mode A.3, Horizontal polarity (30MHz – 1GHz)	20
Figure 20: Test figure of spurious emissions, mode A.3, Vertical polarity (30MHz – 1GHz)	21
Figure 21: Test figure of spurious emissions, mode A.3, Horizontal polarity (1GHz – 18GHz)	22
Figure 22: Test figure of spurious emissions, mode A.3, Vertical polarity (1GHz – 18GHz)	23
Figure 23: Test figure of spurious emissions, mode A.3, Horizontal polarity (18GHz – 25GHz)	24
Figure 24: Test figure of spurious emissions, mode A.3, Vertical polarity (18GHz – 25GHz)	25
Figure 25: Test figure of Radiated emissions in restricted bands, Mode A.1, Horizontal	26
Figure 26: Test figure of Radiated emissions in restricted bands, Mode A.1, Vertical	27
Figure 27: Test figure of Radiated emissions in restricted bands, Mode A.3, Horizontal	28
Figure 28: Test figure of Radiated emissions in restricted bands, Mode A.3, Vertical	29
Figure 29: Test figure of conducted spurious emissions measured in 100kHz Bandwidth, Mode A.1, GFSK Modulation	30
Figure 30: Test figure of conducted spurious emissions measured in 100kHz Bandwidth, Mode A.2, GFSK Modulation	31
Figure 31: Test figure of conducted spurious emissions measured in 100kHz Bandwidth, Mode A.3, GFSK Modulation	32
Figure 32: Test figure of conducted spurious emissions measured in 100kHz Bandwidth, Mode A.1, 8DPSK Modulation	33
Figure 33: Test figure of conducted spurious emissions measured in 100kHz Bandwidth, Mode A.2, 8DPSK Modulation	34
Figure 34: Test figure of conducted spurious emissions measured in 100kHz Bandwidth, Mode A.3, 8DPSK Modulation	35
Figure 35: Test figure of Conducted emissions, Mode C, D, E, line live	36
Figure 36: Test figure of Conducted emissions, Mode C, D, E, line neutral	37
Figure 37: Test figure of Radiated emissions, Mode C, Below 1GHz, Horizontal	38
Figure 38: Test figure of Radiated emissions, Mode C, Below 1GHz, Vertical	39
Figure 39: Test figure of Radiated emissions, Mode C, Above 1GHz, Horizontal	40
Figure 40: Test figure of Radiated emissions, Mode C, Above 1GHz, Vertical	41
Figure 41: Test figure of Radiated emissions, Mode D, Below 1GHz, Horizontal	42
Figure 42: Test figure of Radiated emissions, Mode D, Below 1GHz, Vertical	43
Figure 43: Test figure of Radiated emissions, Mode D, Above 1GHz, Horizontal	44
Figure 44: Test figure of Radiated emissions, Mode D, Above 1GHz, Vertical	45

Note: The product name HP Wireless Mini Speaker S6500 in test result is replaced by HP Wireless Speaker S6500.

Figure 1: Test figure of spurious emissions, mode A.1, Horizontal polarity (9kHz – 30MHz)

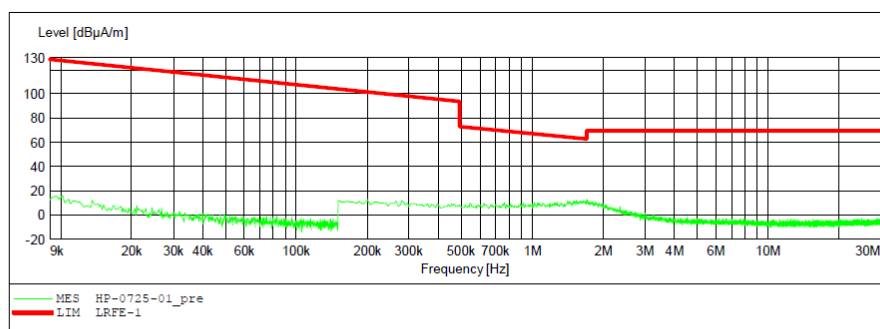
ACCURATE TECHNOLOGY CO.,LTD

FCC Class B 3M Radiated

EUT: HP Wireless Mini Speaker S6500 M/N:BC1101
 Manufacturer: Hewlett Packard
 Operating Condition: TX 2402MHz
 Test Site: 2# Chamber
 Operator: LAN
 Test Specification: DC 3.7V
 Comment: X
 Start of Test: 2015-7-25 /

SCAN TABLE: "LFRE Fin"

Short Description:			_SUB_STD_VTERM2 1.70			
Start	Stop	Step	Detector	Meas. Time	IF Bandw.	Transducer
Frequency	Frequency	Width				
9.0 kHz	150.0 kHz	100.0 Hz	QuasiPeak	1.0 s	200 Hz	1516M
150.0 kHz	30.0 MHz	5.0 kHz	QuasiPeak	1.0 s	9 kHz	1516M



**Figure 2: Test figure of spurious emissions, mode A.1, Vertical polarity
(9kHz – 30MHz)**

ACCURATE TECHNOLOGY CO.,LTD

FCC Class B 3M Radiated

EUT: HP Wireless Mini Speaker S6500 M/N:BC1101
 Manufacturer: Hewlett Packard
 Operating Condition: TX 2402MHz
 Test Site: 2# Chamber
 Operator: LAN
 Test Specification: DC 3.7V
 Comment: Y
 Start of Test: 2015-7-25 /

SCAN TABLE: "LFRE Fin"

Start	Stop	Step	Detector	Meas. Time	IF Bandw.	Transducer
9.0 kHz	150.0 kHz	100.0 Hz	QuasiPeak	1.0 s	200 Hz	1516M
150.0 kHz	30.0 MHz	5.0 kHz	QuasiPeak	1.0 s	9 kHz	1516M

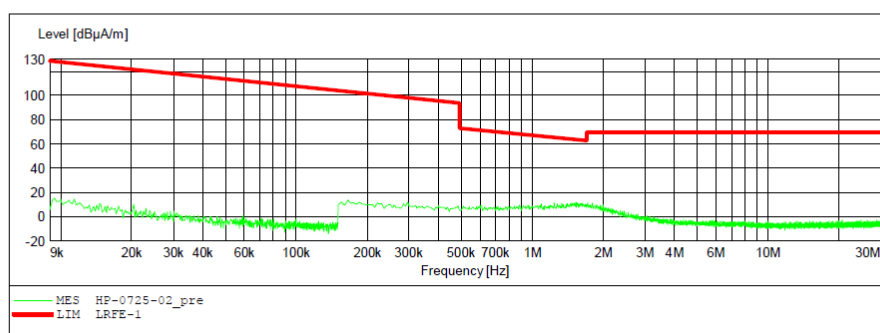


Figure 3: Test figure of spurious emissions, mode A.1, Horizontal polarity (30MHz – 1GHz)

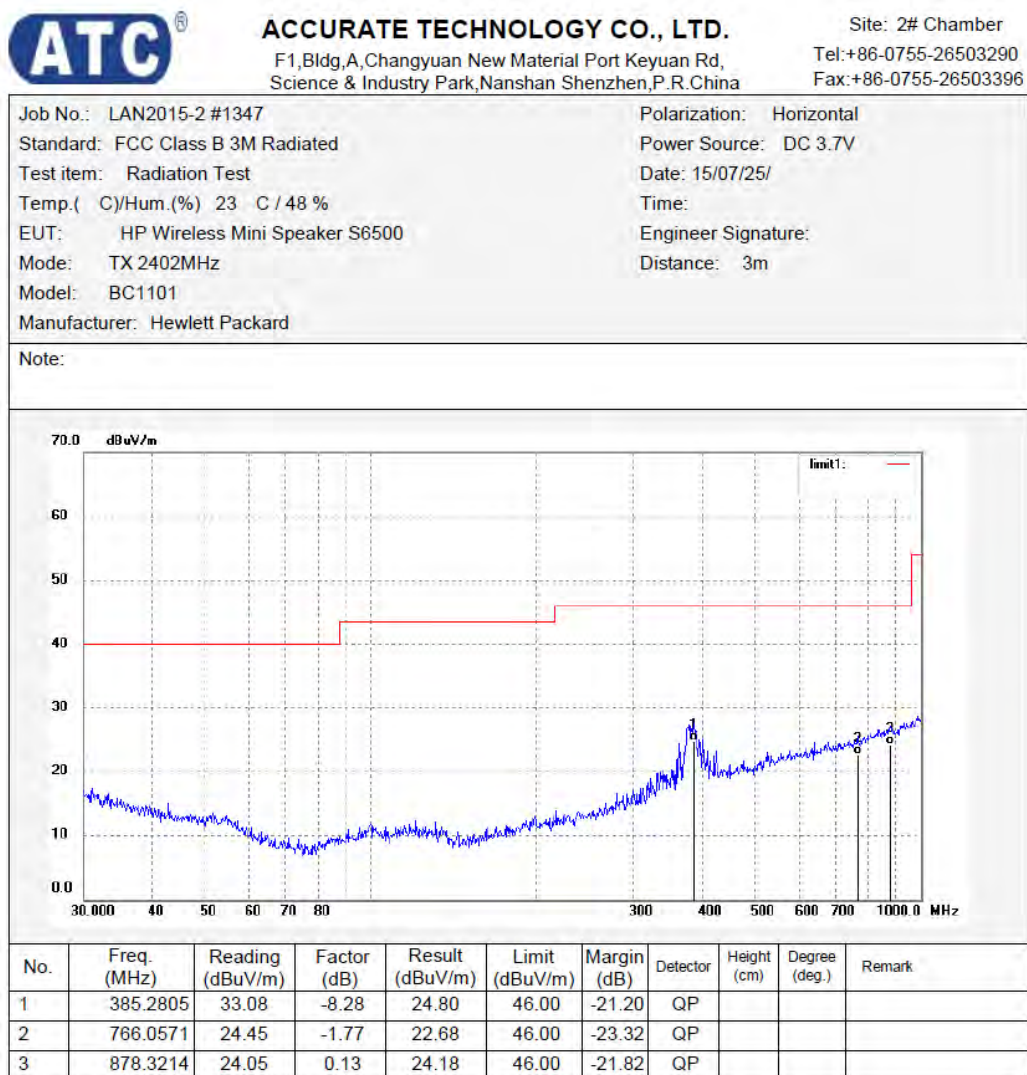


Figure 4: Test figure of spurious emissions, mode A.1, Vertical polarity (30MHz – 1GHz)

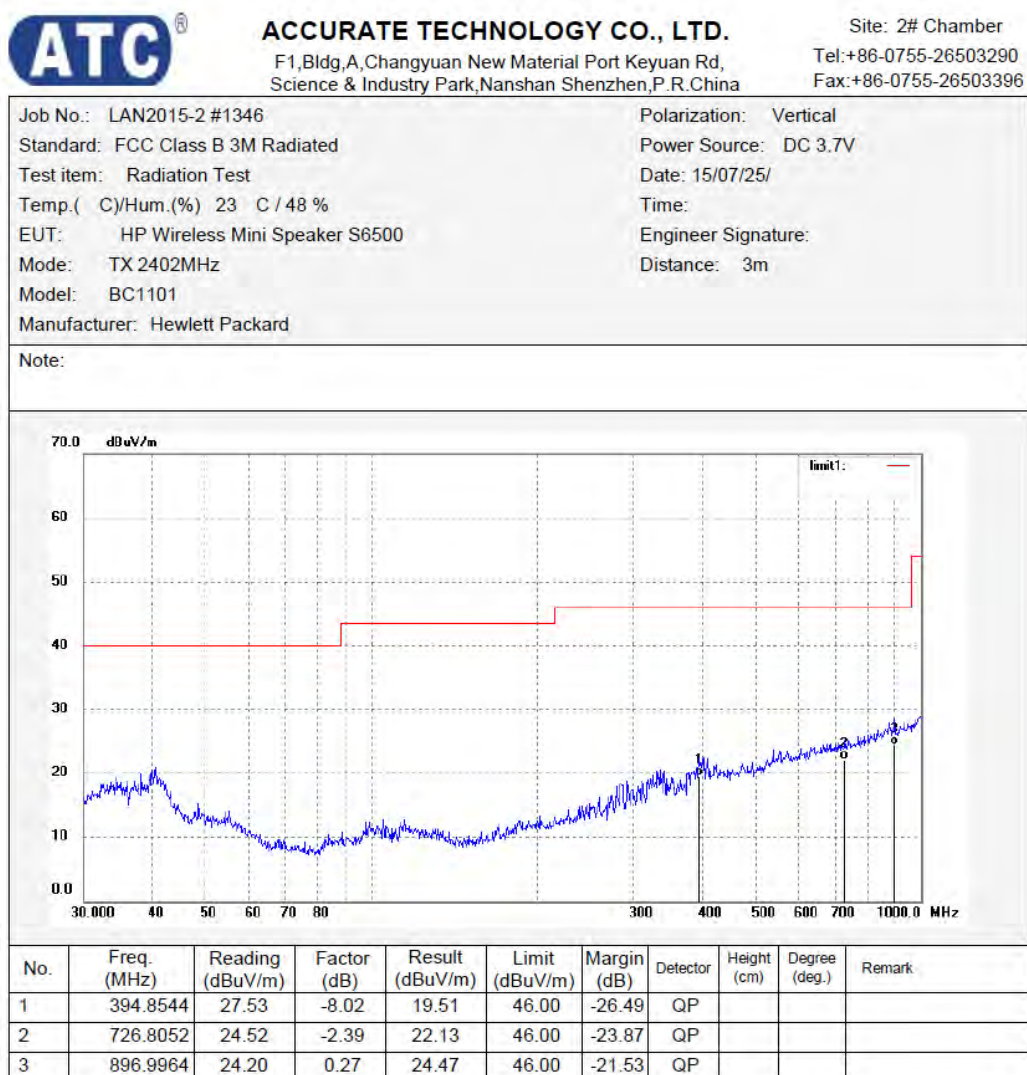


Figure 5: Test figure of spurious emissions, mode A.1, Horizontal polarity (1GHz –18GHz)

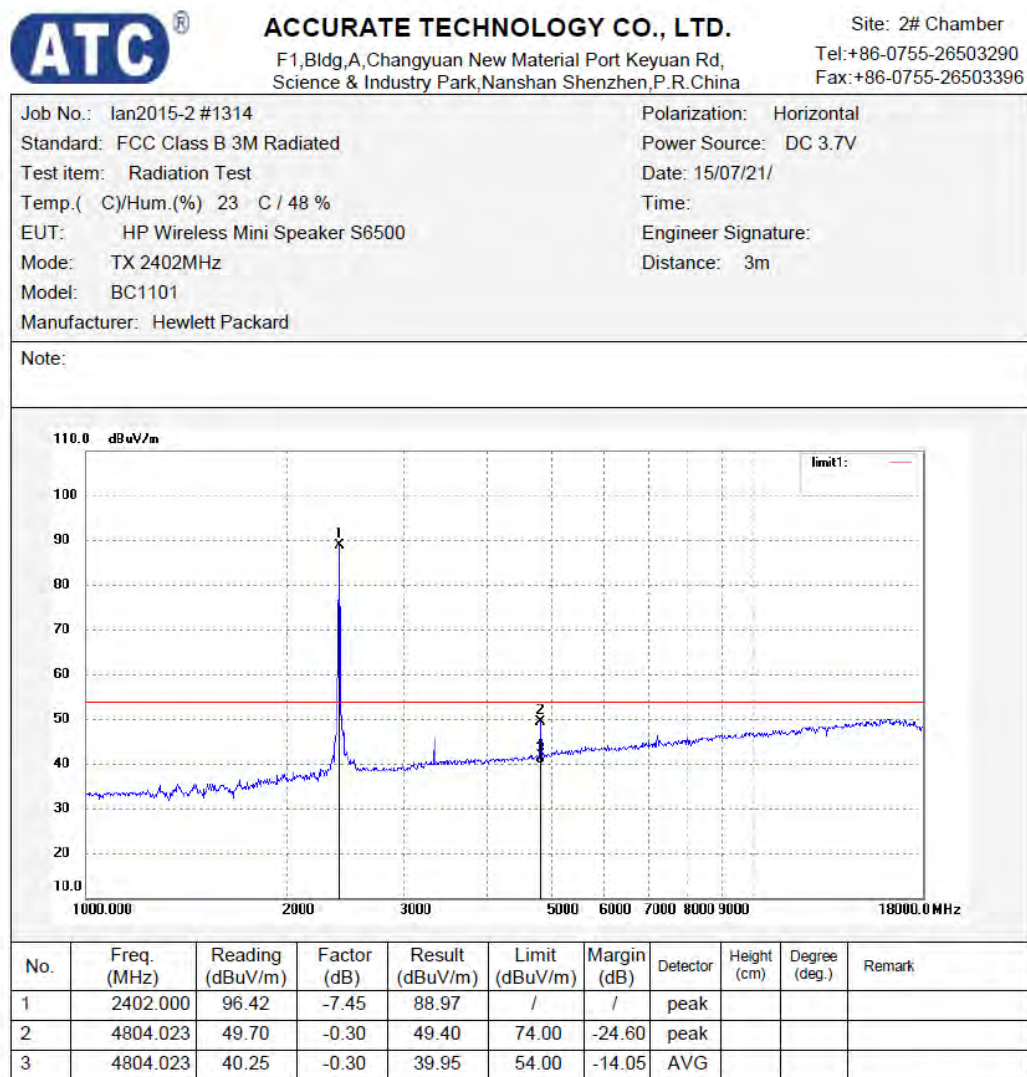


Figure 6: Test figure of spurious emissions, mode A.1, Vertical polarity (1GHz – 18GHz)

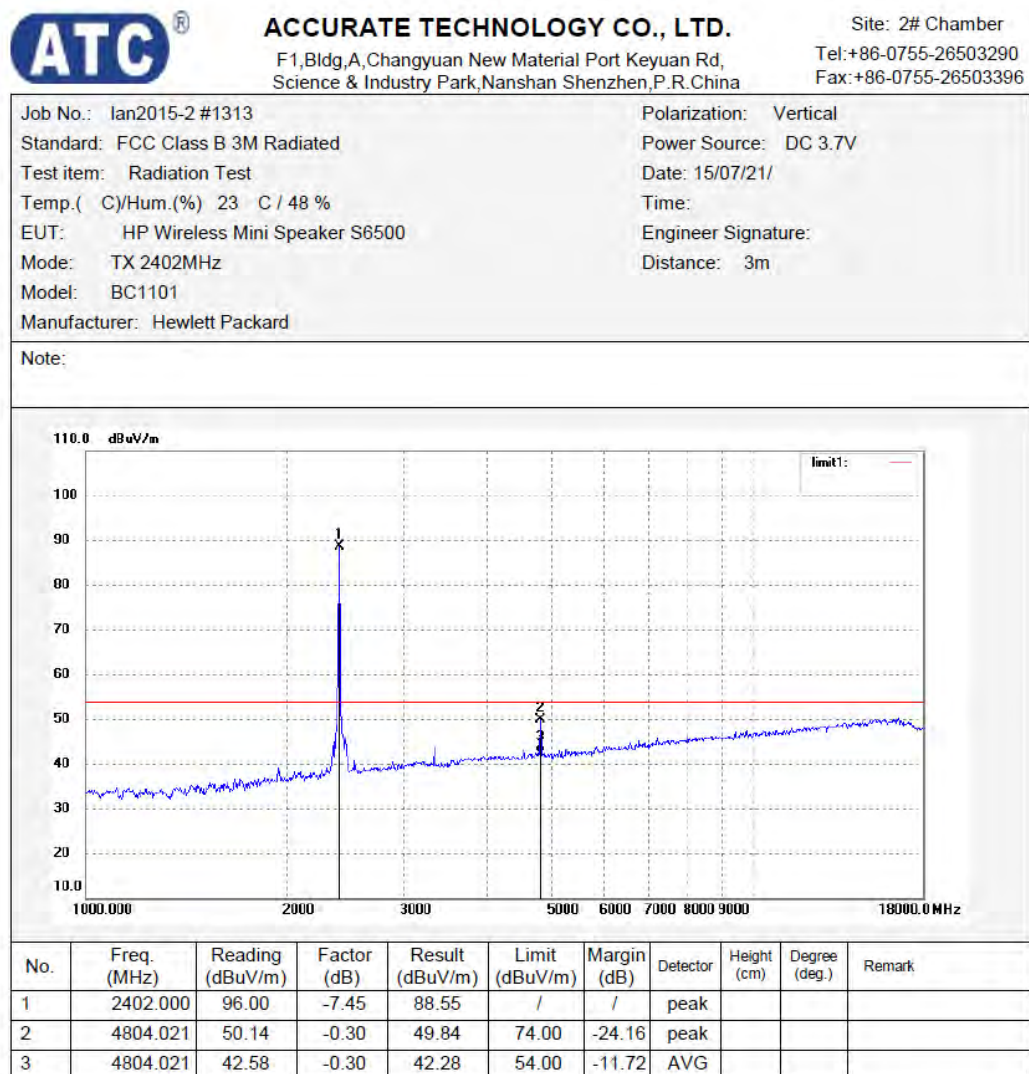


Figure 7: Test figure of spurious emissions, mode A.1, Horizontal polarity (18GHz –25GHz)

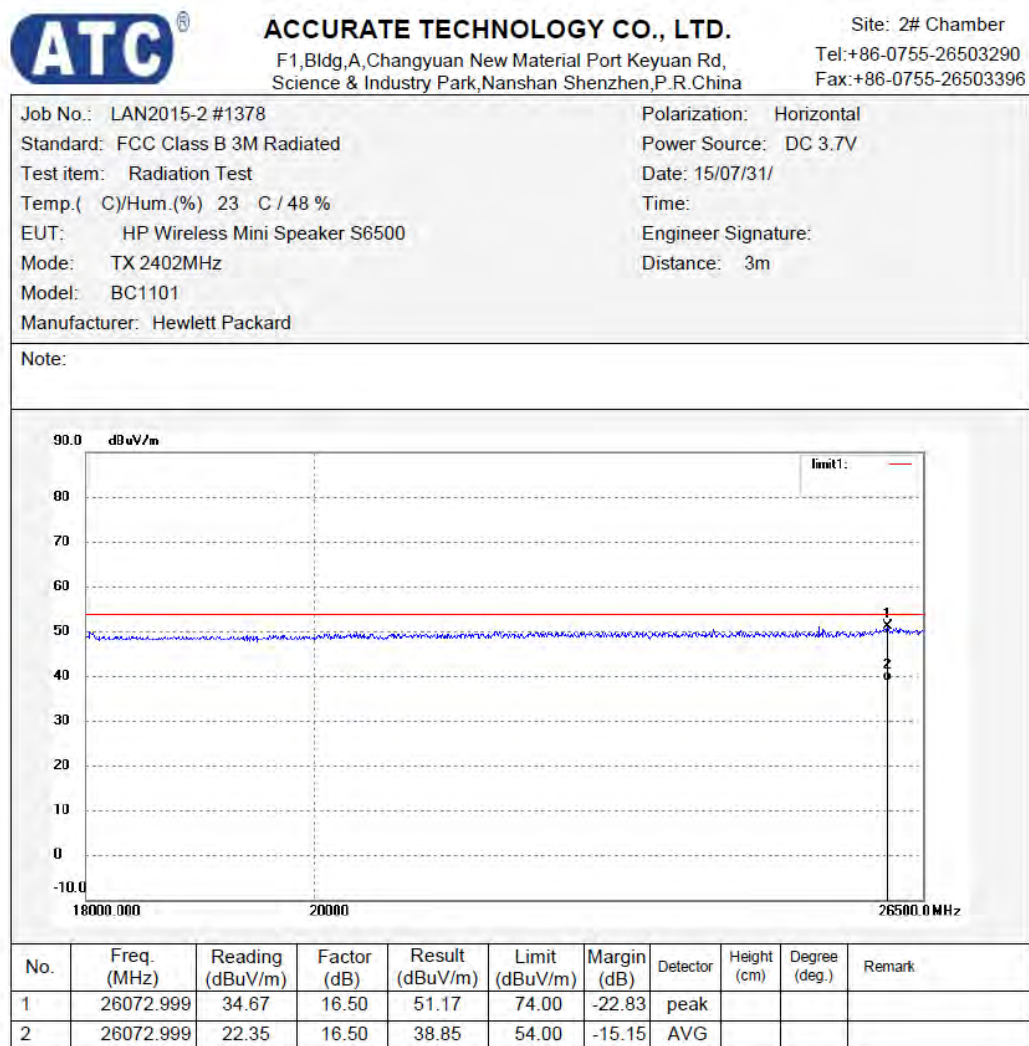


Figure 8: Test figure of spurious emissions, mode A.1, Vertical polarity (18GHz – 25GHz)

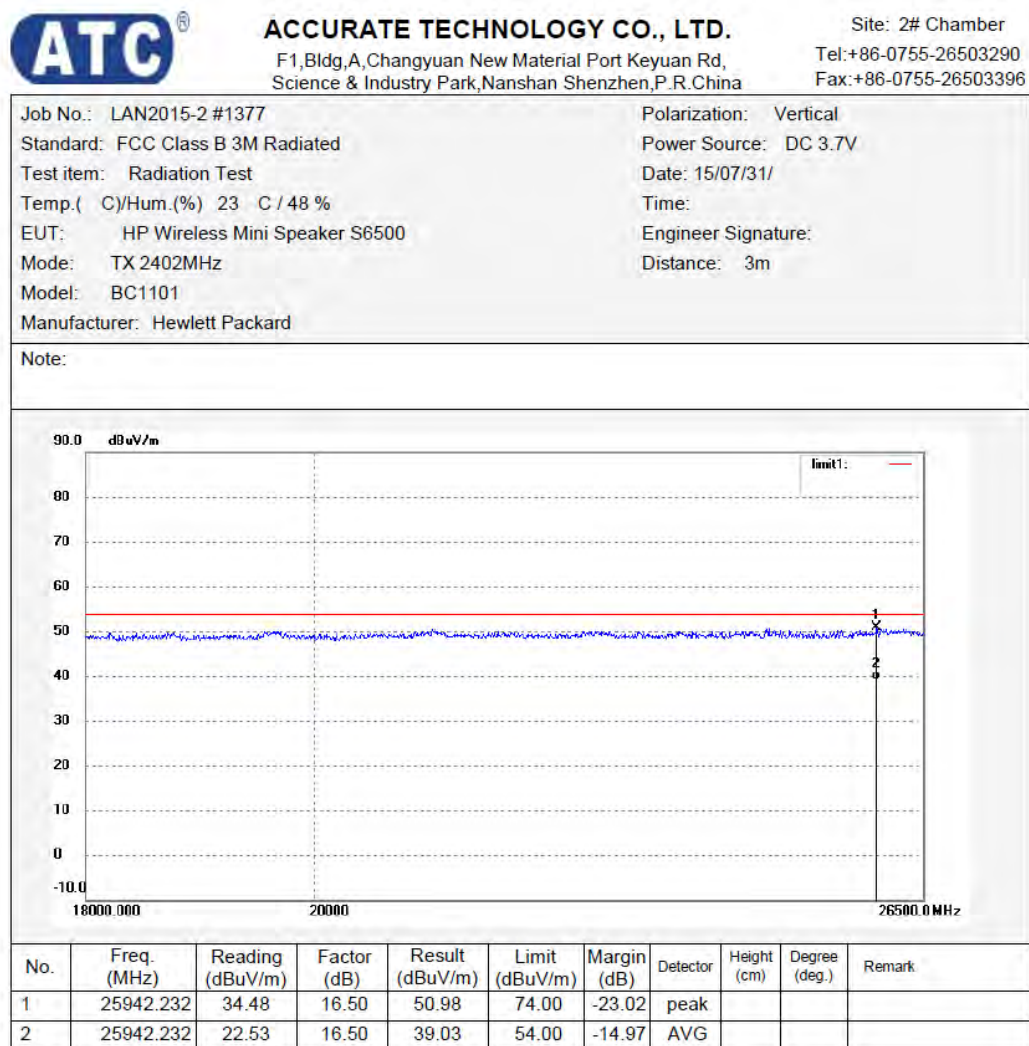


Figure 9: Test figure of spurious emissions, mode A.2, Horizontal polarity (9kHz – 30MHz)

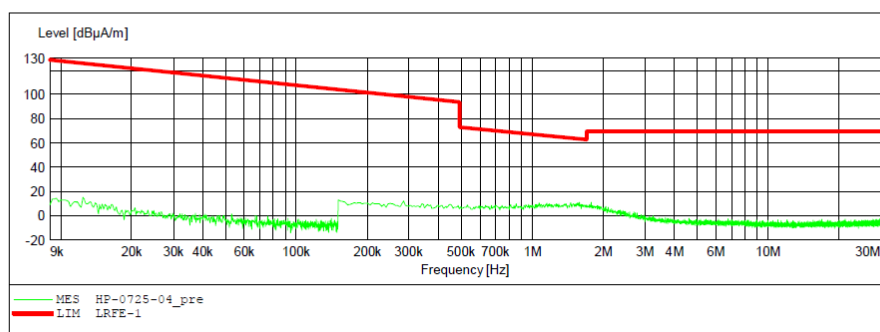
ACCURATE TECHNOLOGY CO.,LTD

FCC Class B 3M Radiated

EUT: HP Wireless Mini Speaker S6500 M/N:BC1101
 Manufacturer: Hewlett Packard
 Operating Condition: TX 2441MHz
 Test Site: 2# Chamber
 Operator: LAN
 Test Specification: DC 3.7V
 Comment: X
 Start of Test: 2015-7-25 /

SCAN TABLE: "LFRE Fin"

Short Description:			_SUB_STD_VTERM2 1.70			
Start	Stop	Step	Detector	Meas. Time	IF Bandw.	Transducer
9.0 kHz	150.0 kHz	100.0 Hz	QuasiPeak	1.0 s	200 Hz	1516M
150.0 kHz	30.0 MHz	5.0 kHz	QuasiPeak	1.0 s	9 kHz	1516M



**Figure 10: Test figure of spurious emissions, mode A.2, Vertical polarity
(9kHz – 30MHz)**

ACCURATE TECHNOLOGY CO.,LTD

FCC Class B 3M Radiated

EUT: HP Wireless Mini Speaker S6500 M/N:BC1101
 Manufacturer: Hewlett Packard
 Operating Condition: TX 2441MHz
 Test Site: 2# Chamber
 Operator: LAN
 Test Specification: DC 3.7V
 Comment: Y
 Start of Test: 2015-7-25 /

SCAN TABLE: "LFRE Fin"

Start	Stop	Step	Detector	Meas. Time	IF Bandw.	Transducer
9.0 kHz	150.0 kHz	100.0 Hz	QuasiPeak	1.0 s	200 Hz	1516M
150.0 kHz	30.0 MHz	5.0 kHz	QuasiPeak	1.0 s	9 kHz	1516M

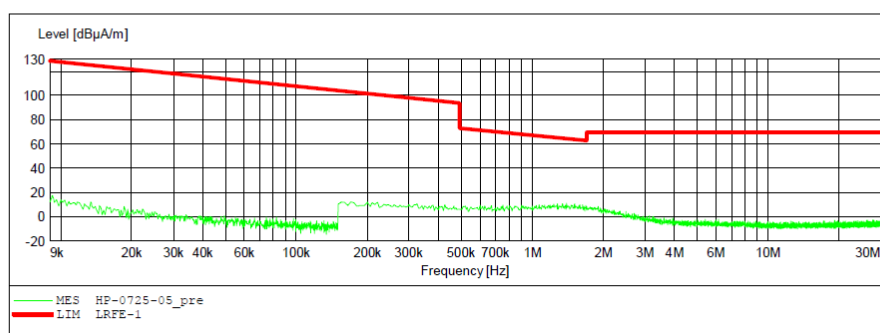


Figure 11: Test figure of spurious emissions, mode A.2, Horizontal polarity (30MHz – 1GHz)

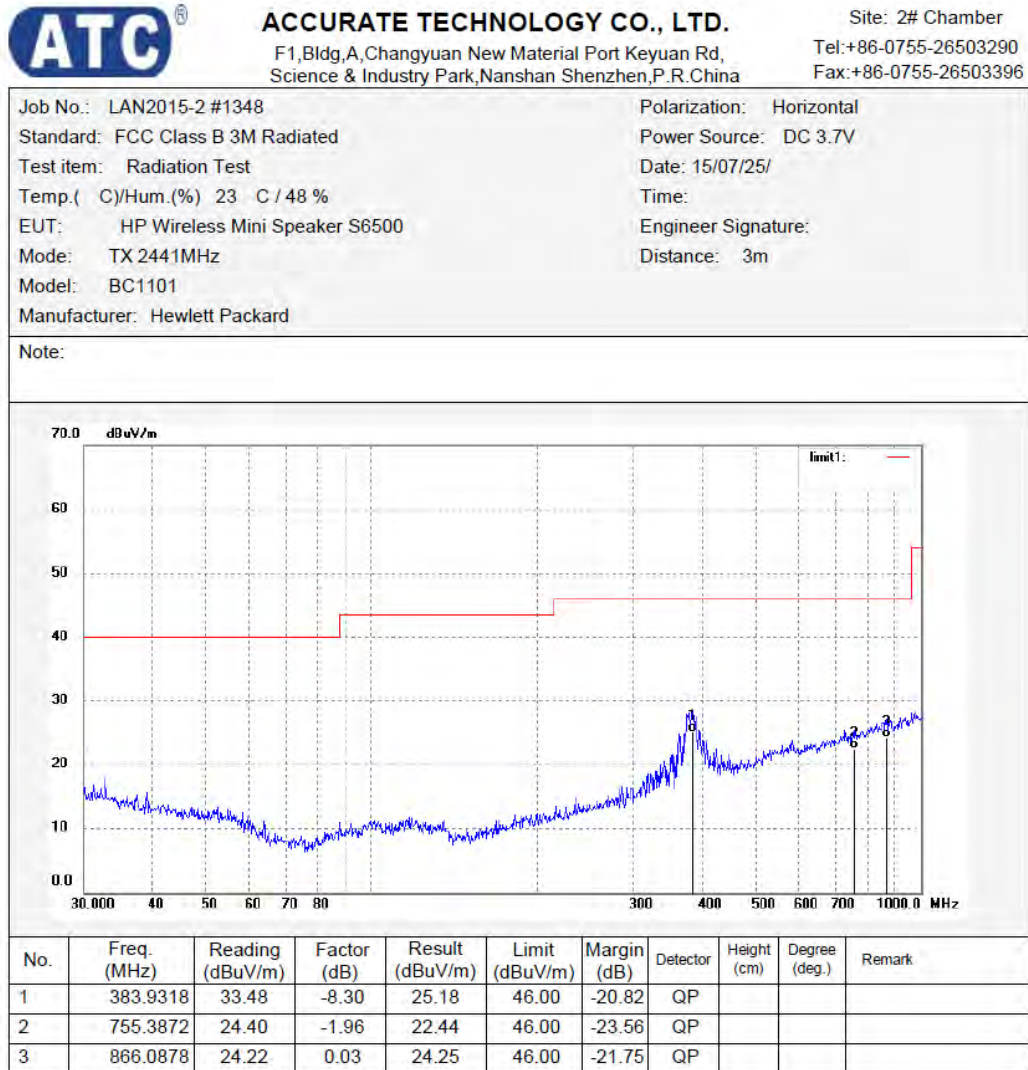


Figure 12: Test figure of spurious emissions, mode A.2, Vertical polarity (30MHz – 1GHz)

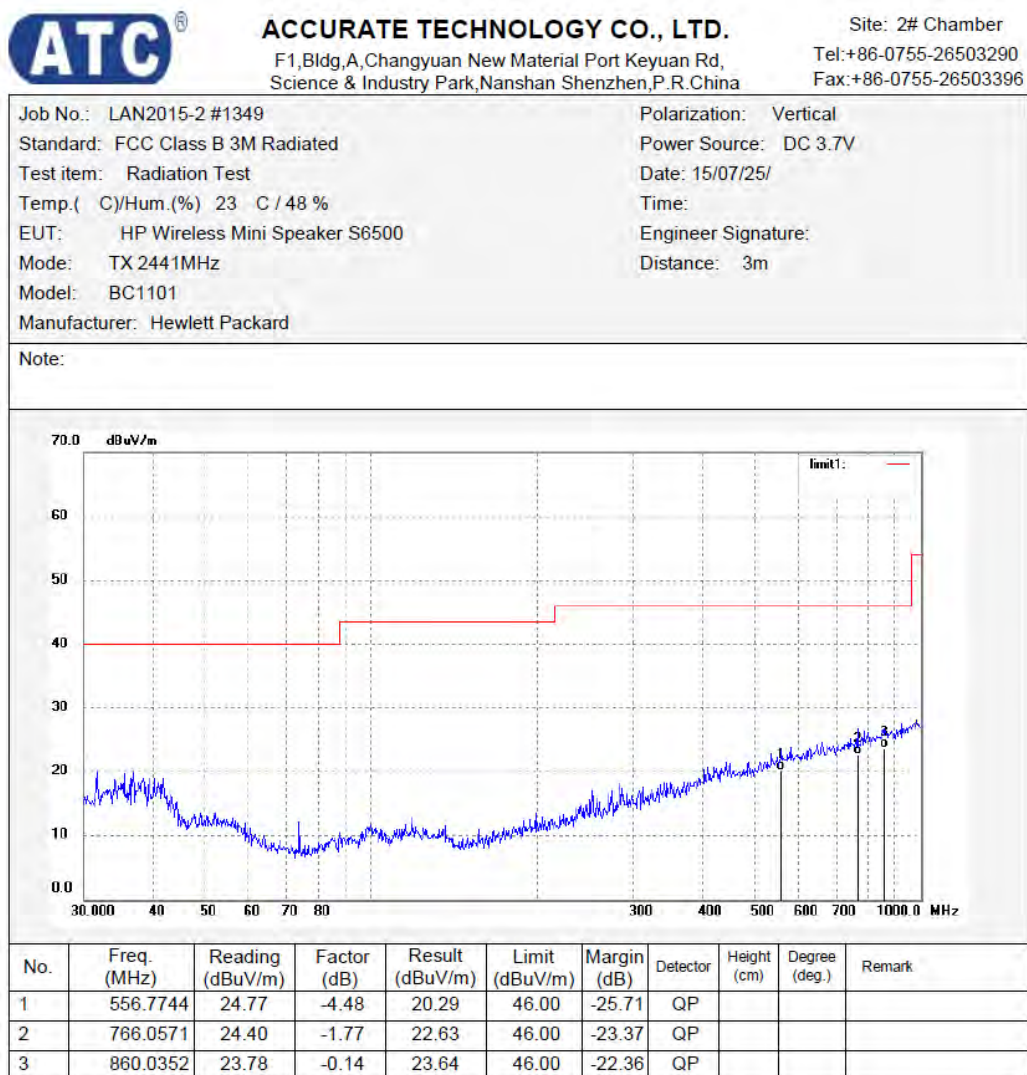


Figure 13: Test figure of spurious emissions, mode A.2, Horizontal polarity (1GHz – 18GHz)

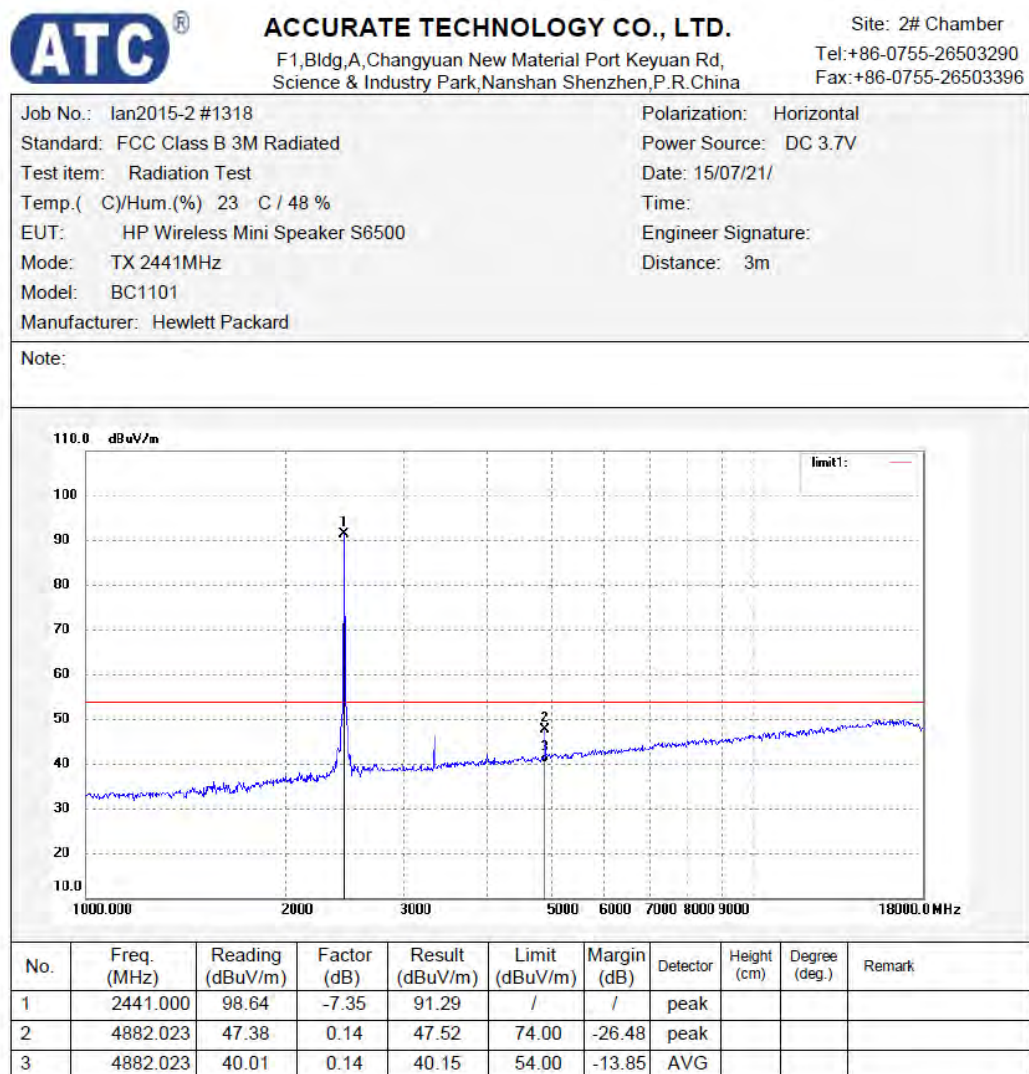


Figure 14: Test figure of spurious emissions, mode A.2, Vertical polarity (1GHz – 18GHz)

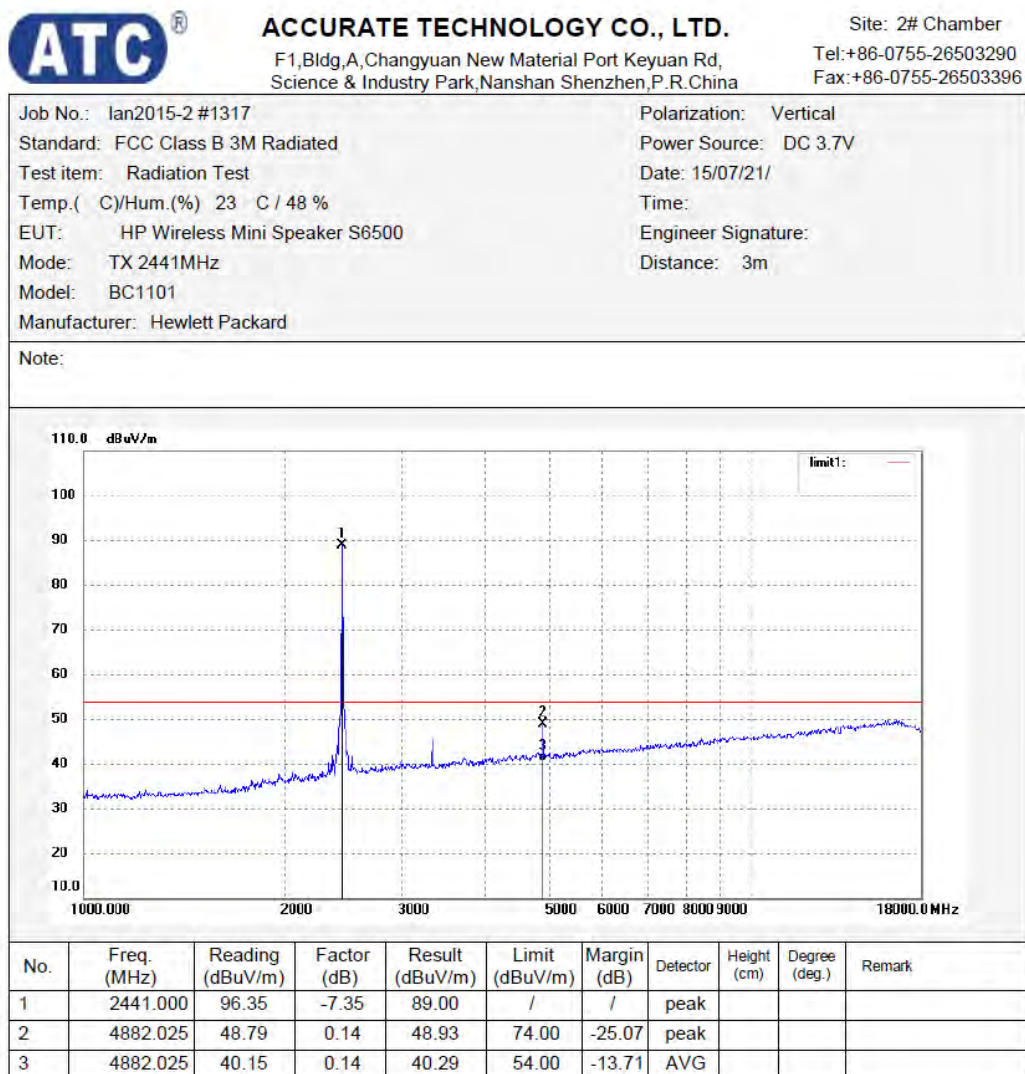


Figure 15: Test figure of spurious emissions, mode A.2, Horizontal polarity (18GHz – 25GHz)

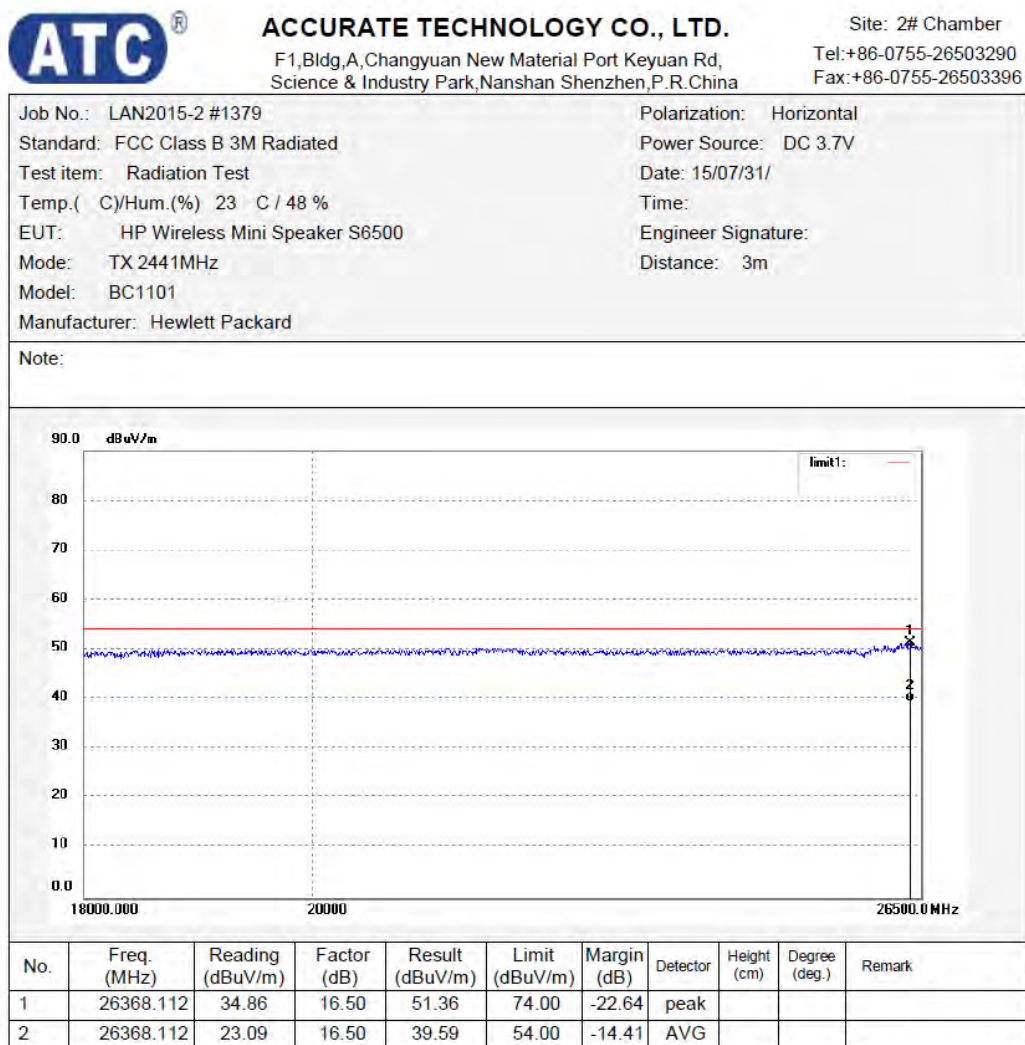


Figure 16: Test figure of spurious emissions, mode A.2, Vertical polarity (18GHz – 25GHz)

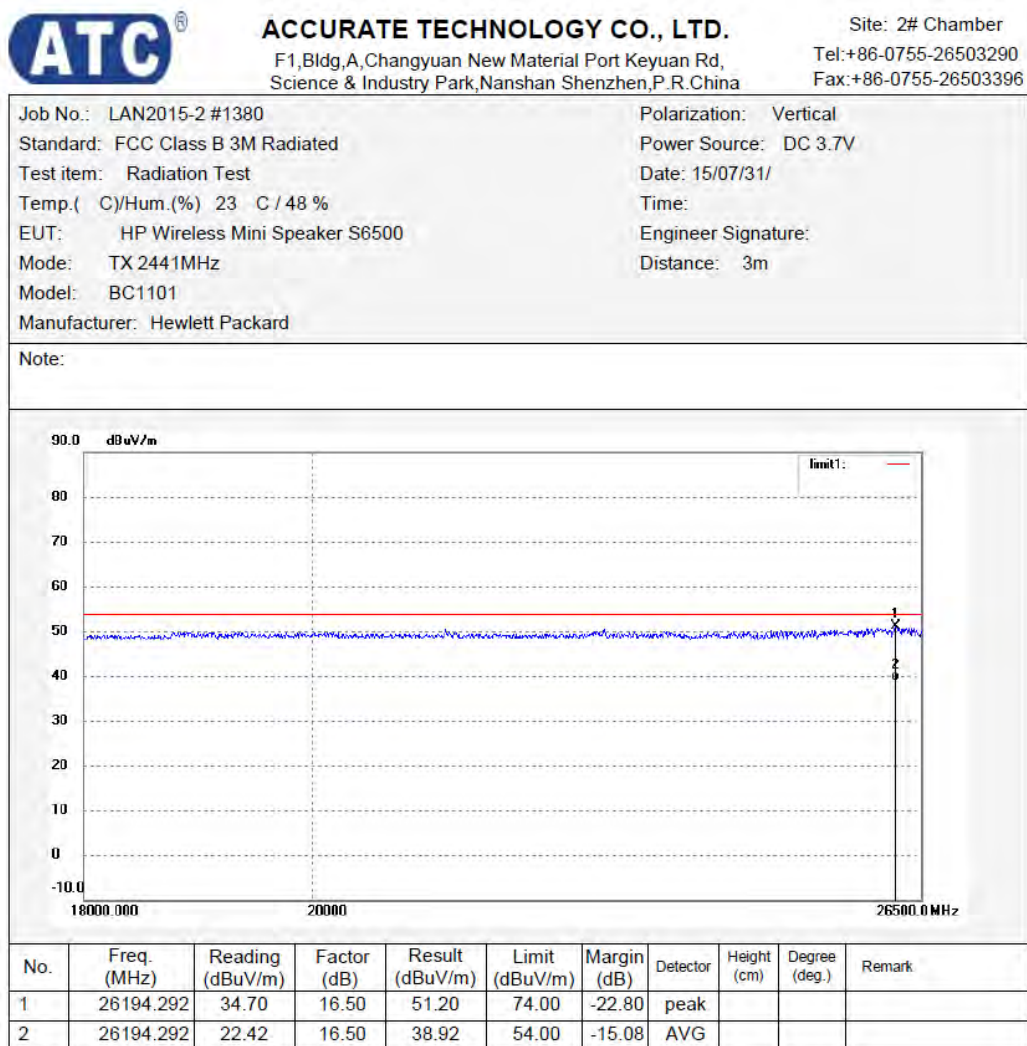


Figure 17: Test figure of spurious emissions, mode A.3, Horizontal polarity (9kHz – 30MHz)

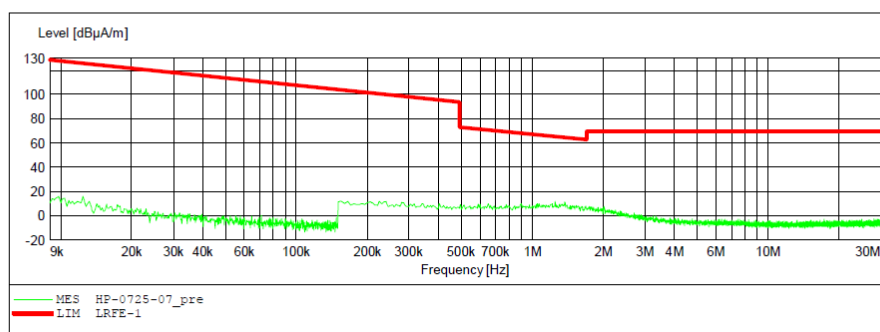
ACCURATE TECHNOLOGY CO.,LTD

FCC Class B 3M Radiated

EUT: HP Wireless Mini Speaker S6500 M/N:BC1101
 Manufacturer: Hewlett Packard
 Operating Condition: TX 2480MHz
 Test Site: 2# Chamber
 Operator: LAN
 Test Specification: DC 3.7V
 Comment: X
 Start of Test: 2015-7-25 /

SCAN TABLE: "LFRE Fin"

Short Description:			_SUB_STD_VTERM2 1.70			
Start	Stop	Step	Detector	Meas. Time	IF Bandw.	Transducer
9.0 kHz	150.0 kHz	100.0 Hz	QuasiPeak	1.0 s	200 Hz	1516M
150.0 kHz	30.0 MHz	5.0 kHz	QuasiPeak	1.0 s	9 kHz	1516M



**Figure 18: Test figure of spurious emissions, mode A.3, Vertical polarity
(9kHz – 30MHz)**

ACCURATE TECHNOLOGY CO.,LTD

FCC Class B 3M Radiated

EUT: HP Wireless Mini Speaker S6500 M/N:BC1101
 Manufacturer: Hewlett Packard
 Operating Condition: TX 2480MHz
 Test Site: 2# Chamber
 Operator: LAN
 Test Specification: DC 3.7V
 Comment: Y
 Start of Test: 2015-7-25 /

SCAN TABLE: "LFRE Fin"

Start	Stop	Step	Detector	Meas. Time	IF Bandw.	Transducer
9.0 kHz	150.0 kHz	100.0 Hz	QuasiPeak	1.0 s	200 Hz	1516M
150.0 kHz	30.0 MHz	5.0 kHz	QuasiPeak	1.0 s	9 kHz	1516M

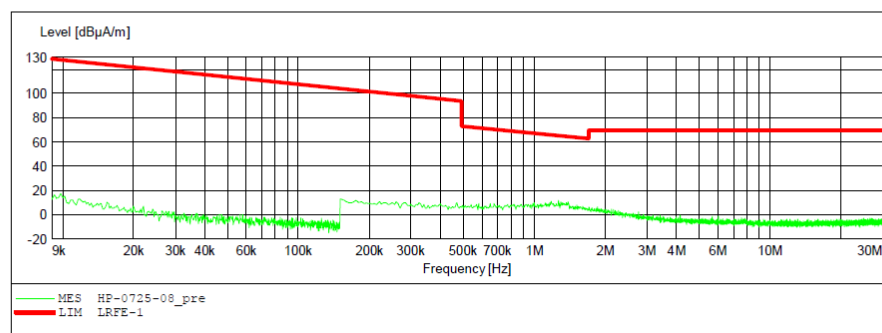


Figure 19: Test figure of spurious emissions, mode A.3, Horizontal polarity (30MHz – 1GHz)

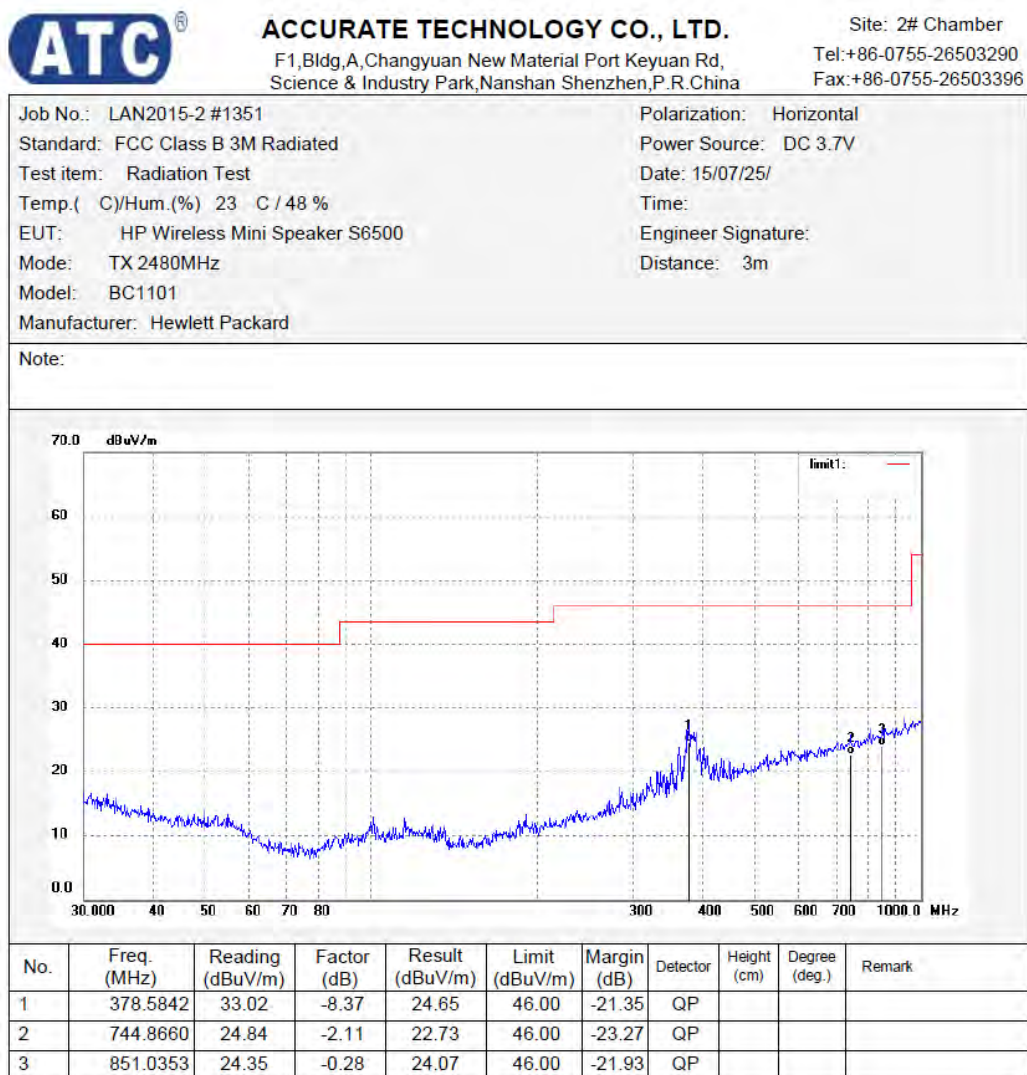


Figure 20: Test figure of spurious emissions, mode A.3, Vertical polarity (30MHz – 1GHz)

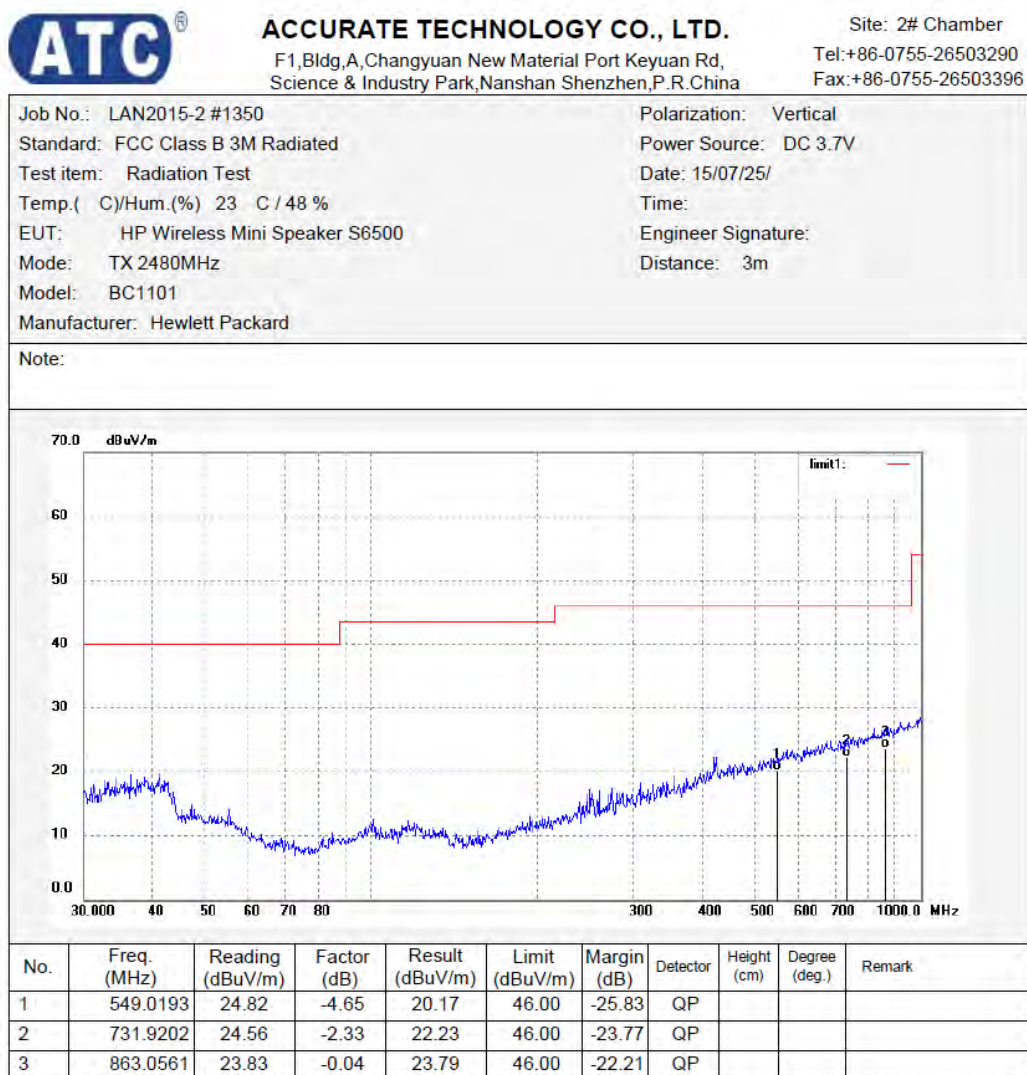


Figure 21: Test figure of spurious emissions, mode A.3, Horizontal polarity (1GHz –18GHz)

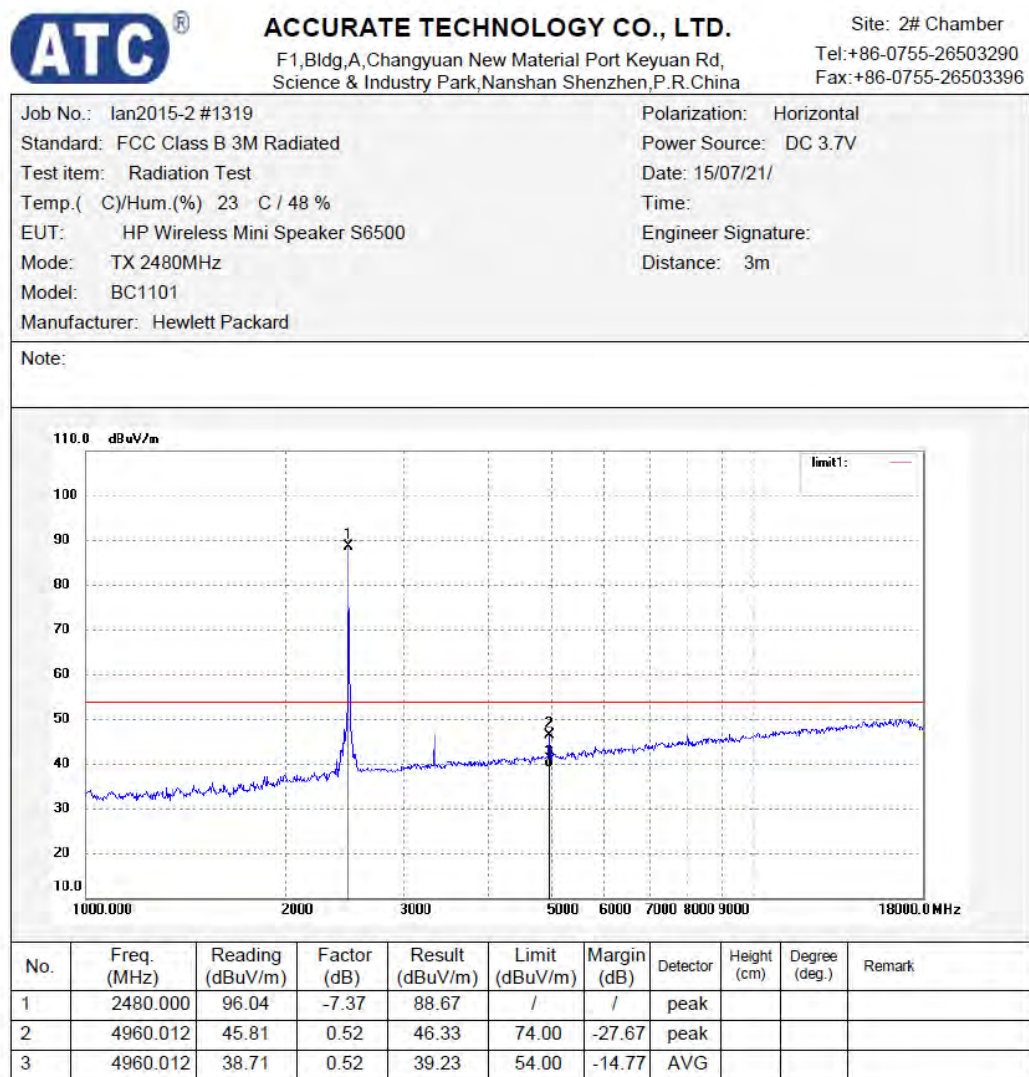


Figure 22: Test figure of spurious emissions, mode A.3, Vertical polarity (1GHz – 18GHz)

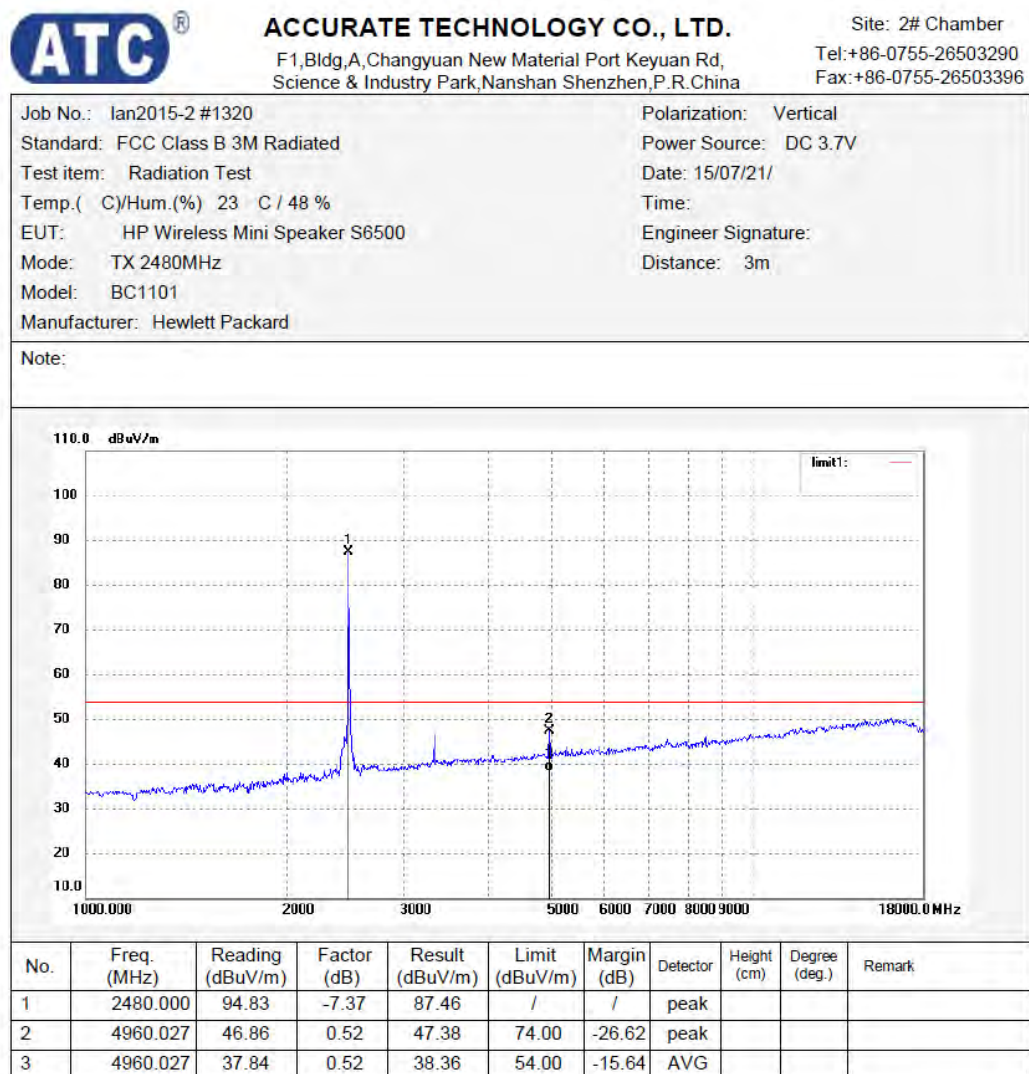


Figure 23: Test figure of spurious emissions, mode A.3, Horizontal polarity (18GHz –25GHz)

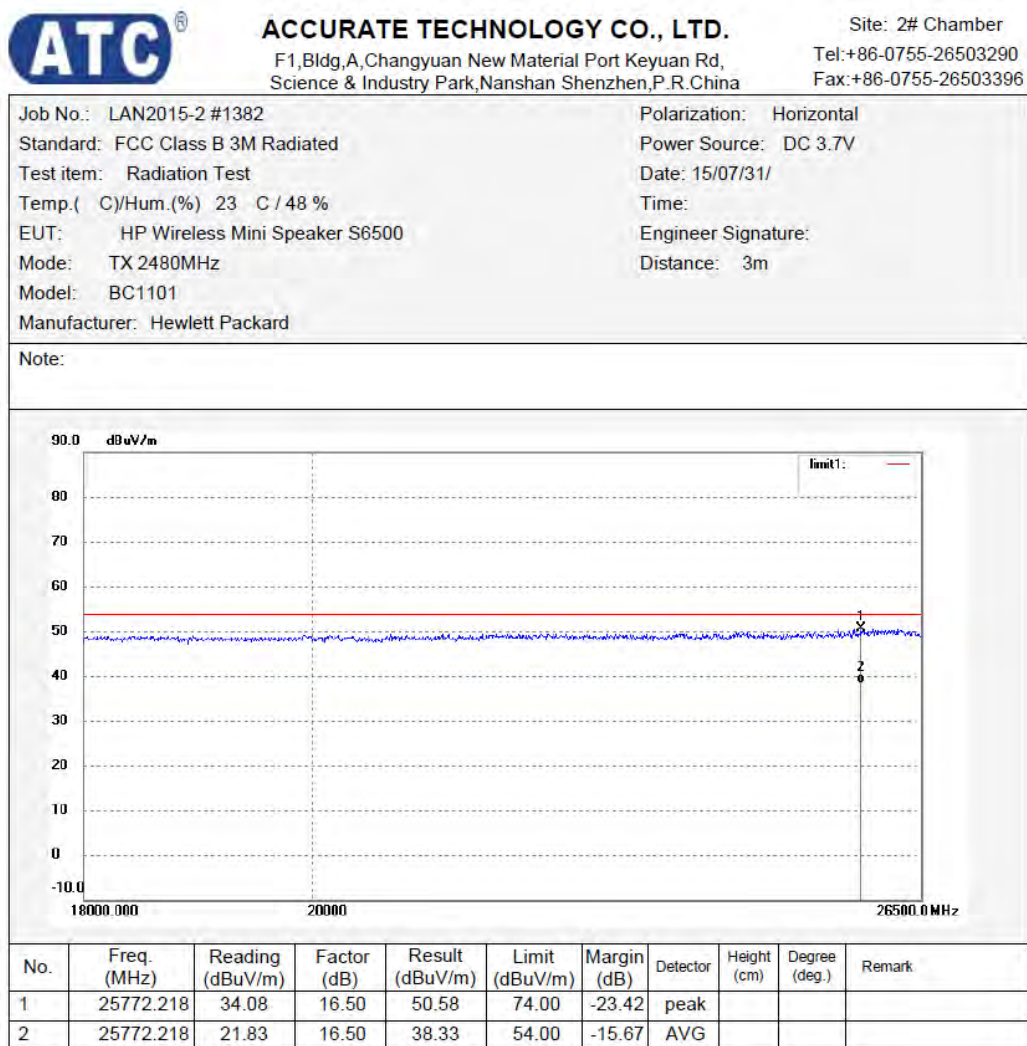


Figure 24: Test figure of spurious emissions, mode A.3, Vertical polarity (18GHz – 25GHz)

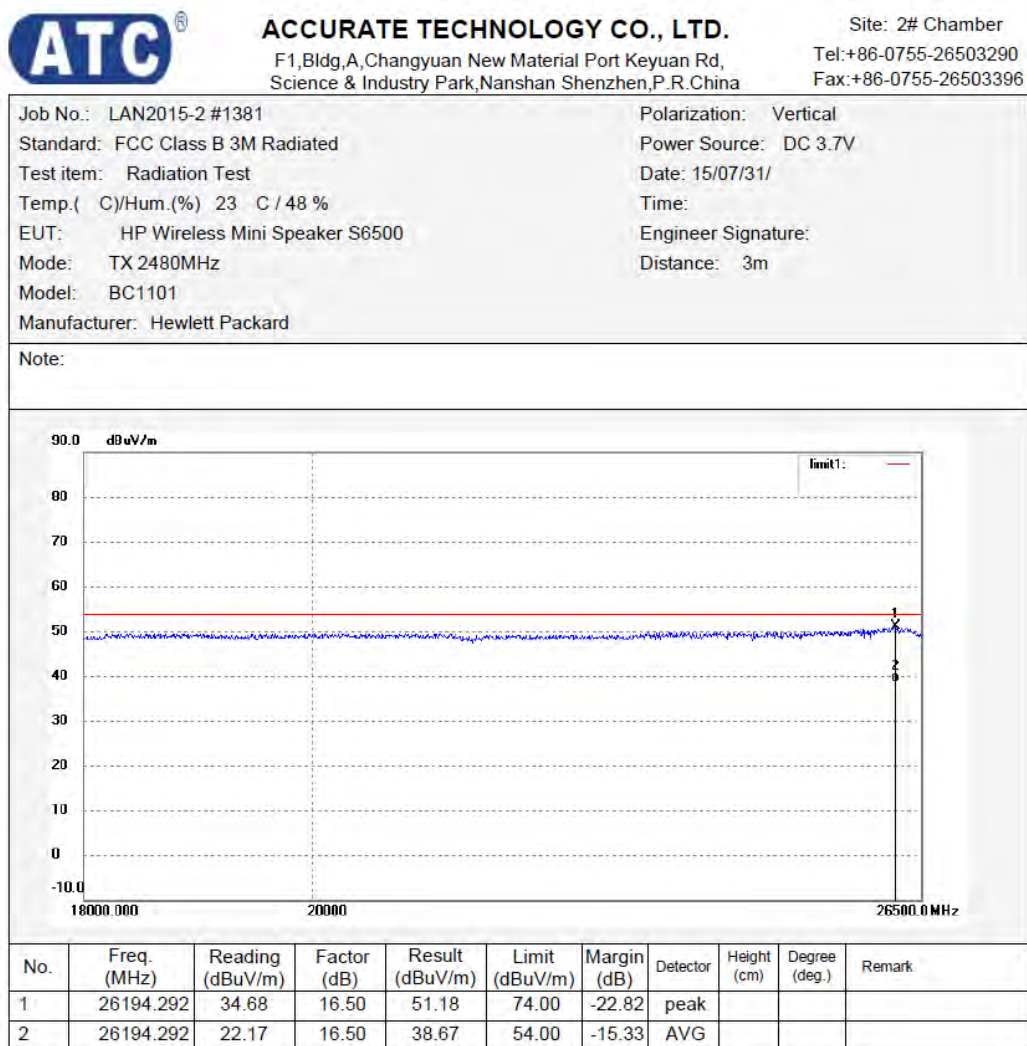


Figure 25: Test figure of Radiated emissions in restricted bands, Mode A.1, Horizontal

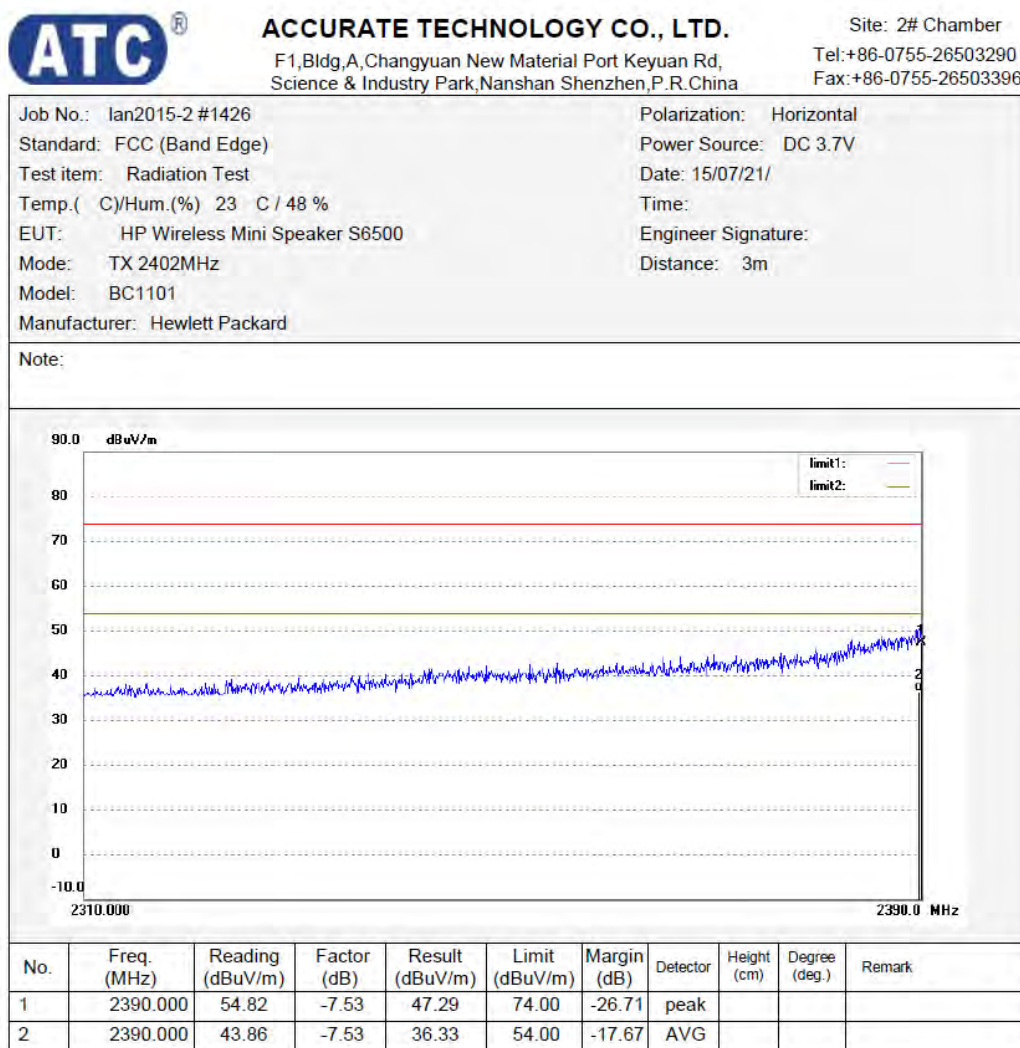


Figure 26: Test figure of Radiated emissions in restricted bands, Mode A.1, Vertical

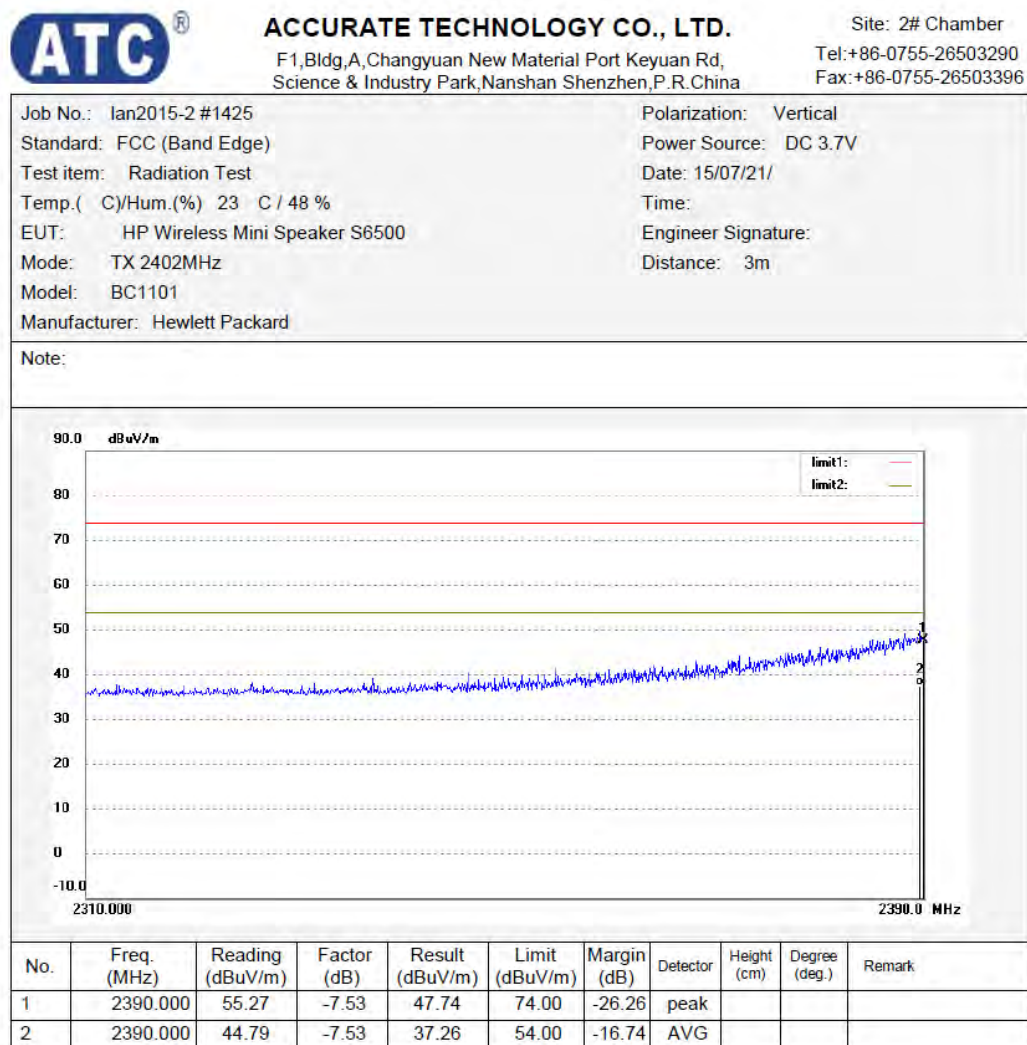


Figure 27: Test figure of Radiated emissions in restricted bands, Mode A.3, Horizontal

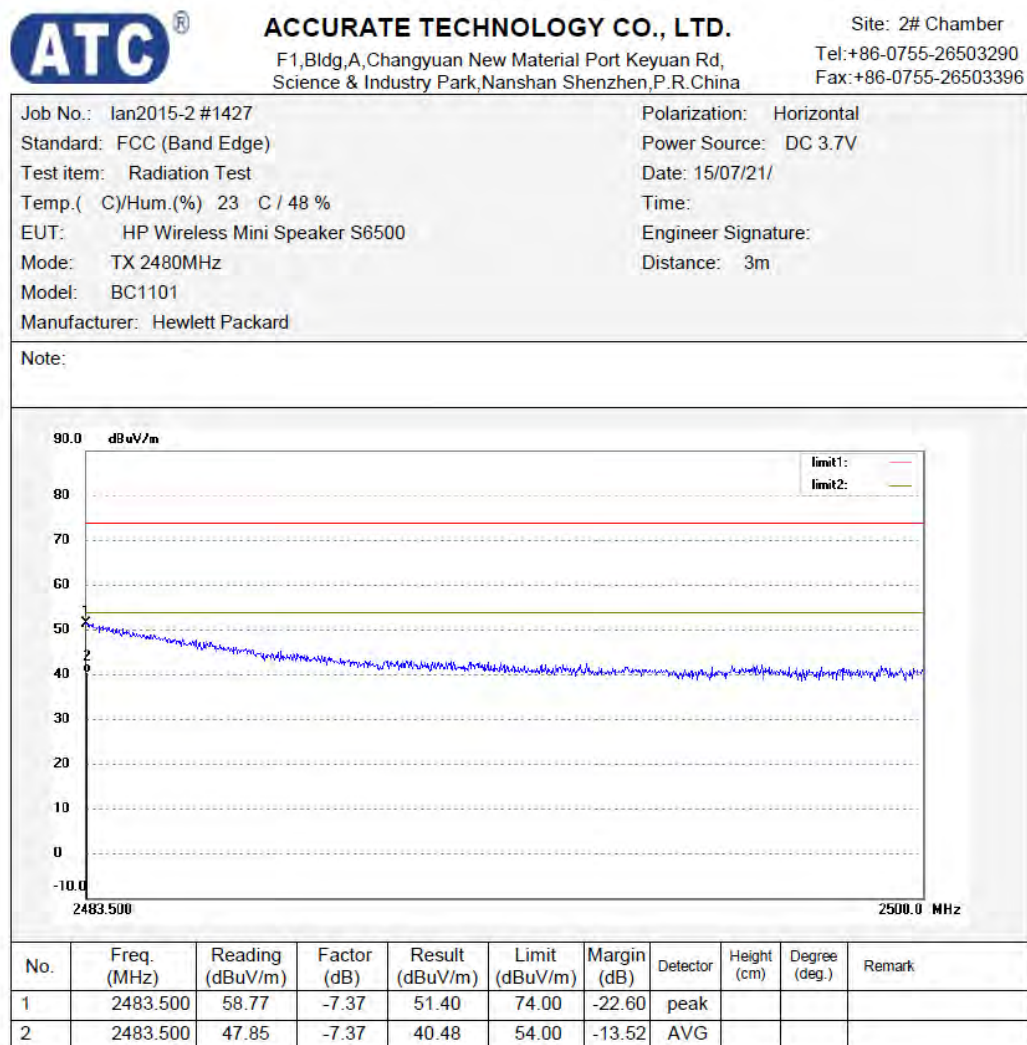


Figure 28: Test figure of Radiated emissions in restricted bands, Mode A.3, Vertical

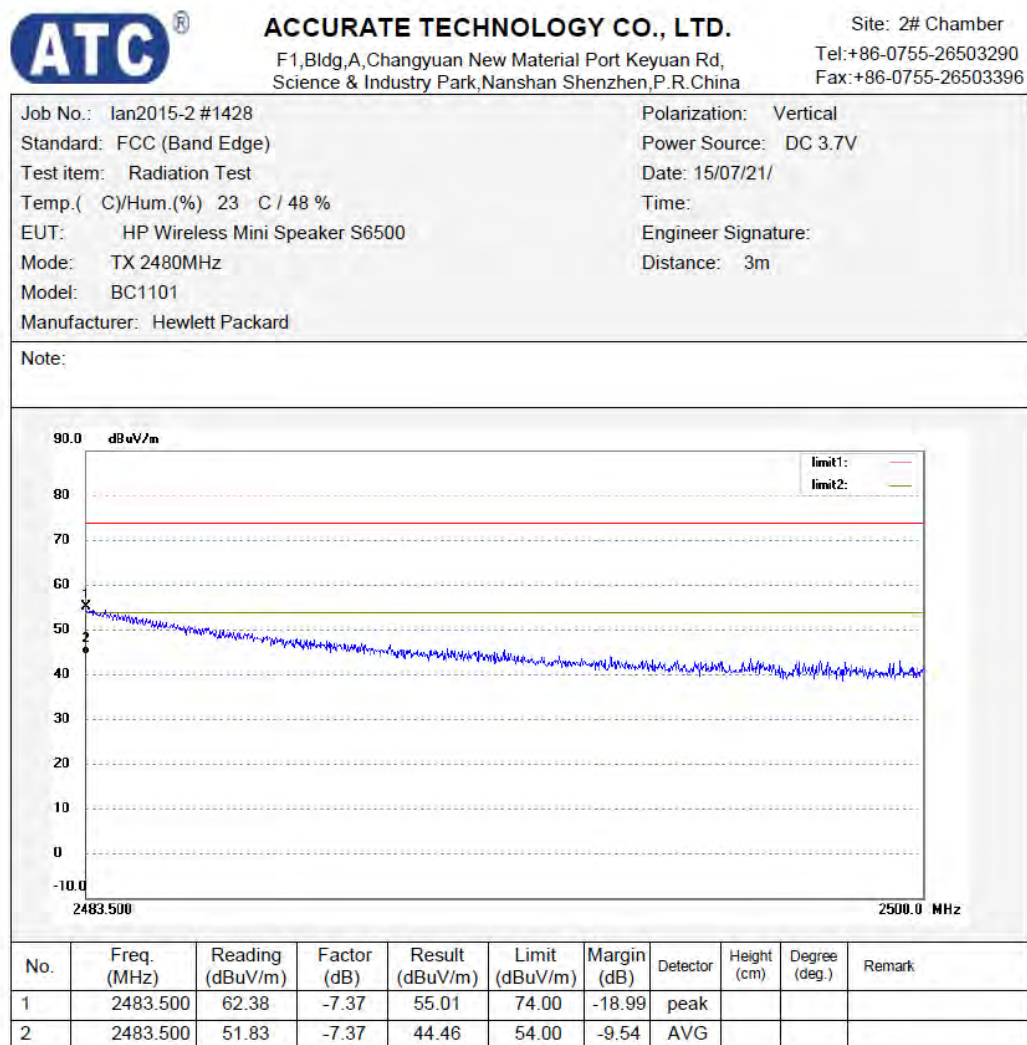
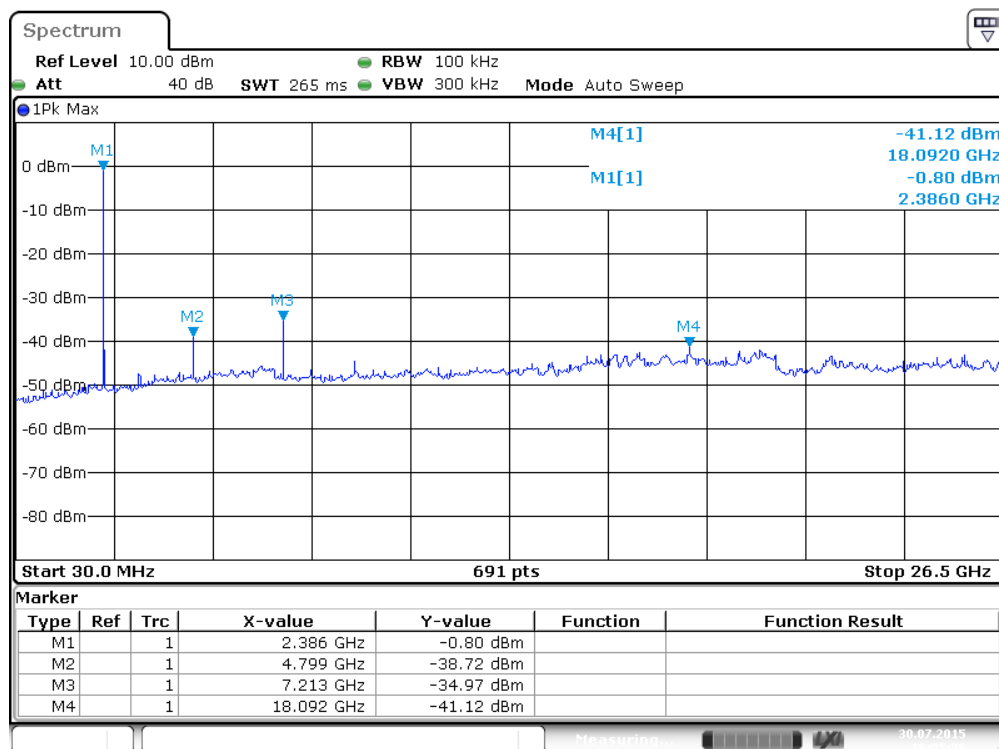
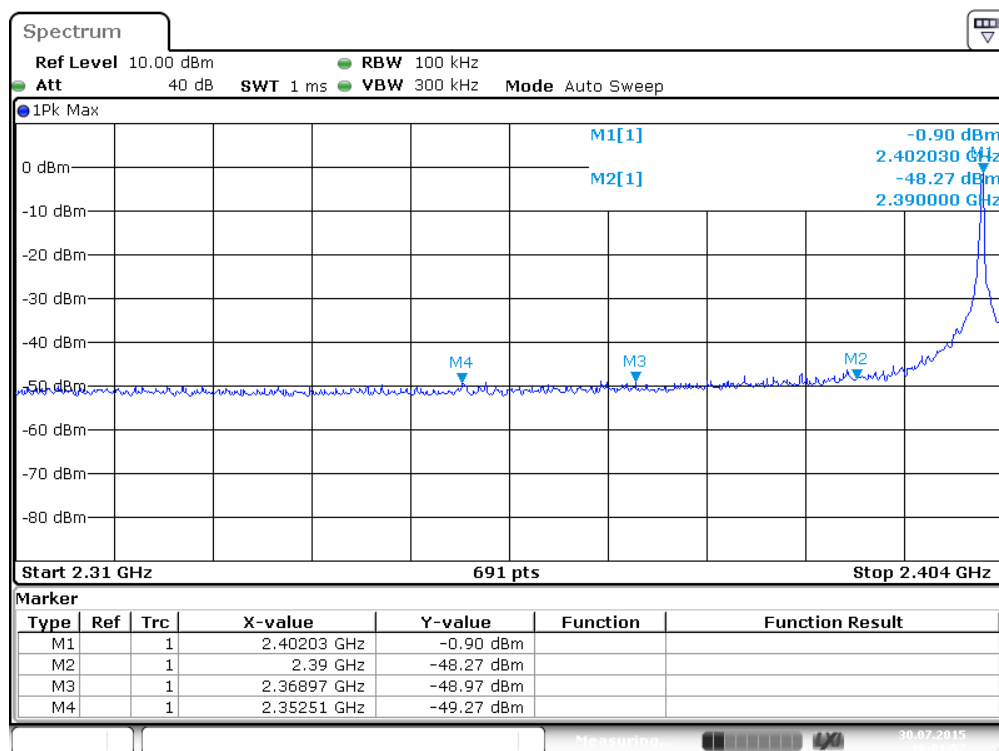


Figure 29: Test figure of conducted spurious emissions measured in 100kHz Bandwidth, Mode A.1, GFSK Modulation

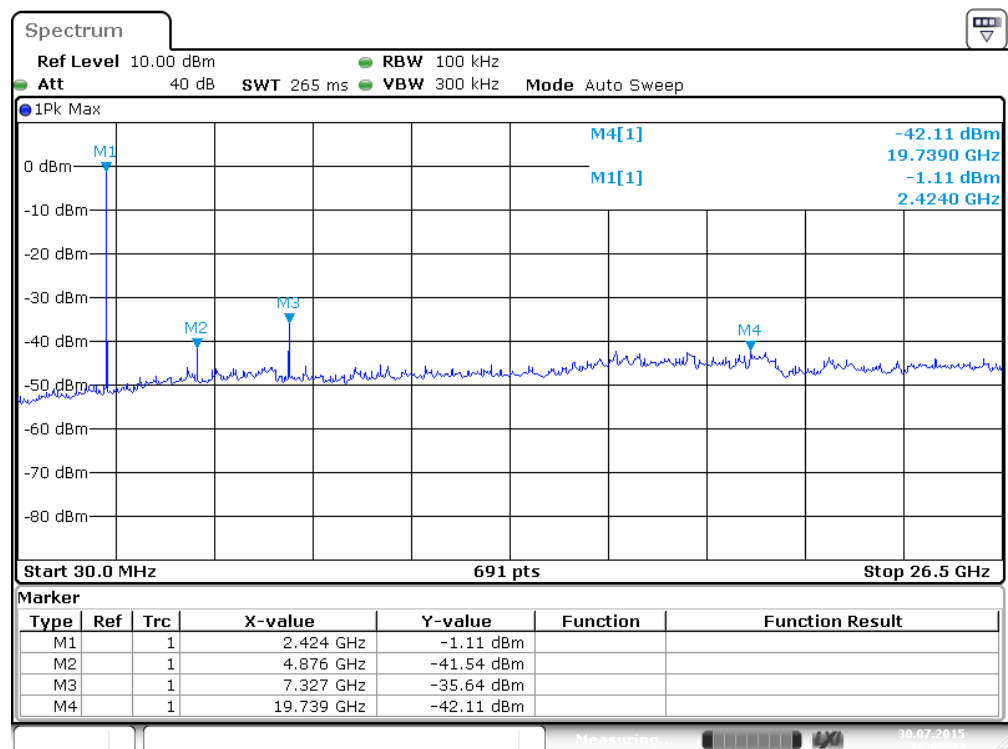


Date: 30.JUL.2015 16:05:26



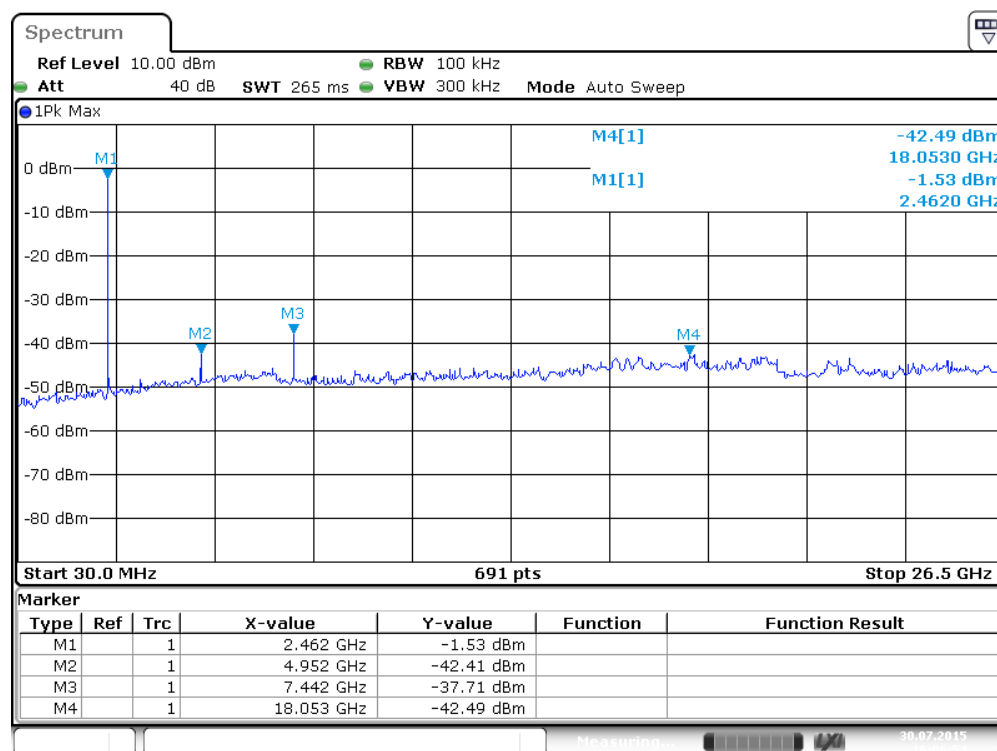
Date: 30.JUL.2015 16:01:58

Figure 30: Test figure of conducted spurious emissions measured in 100kHz Bandwidth, Mode A.2, GFSK Modulation

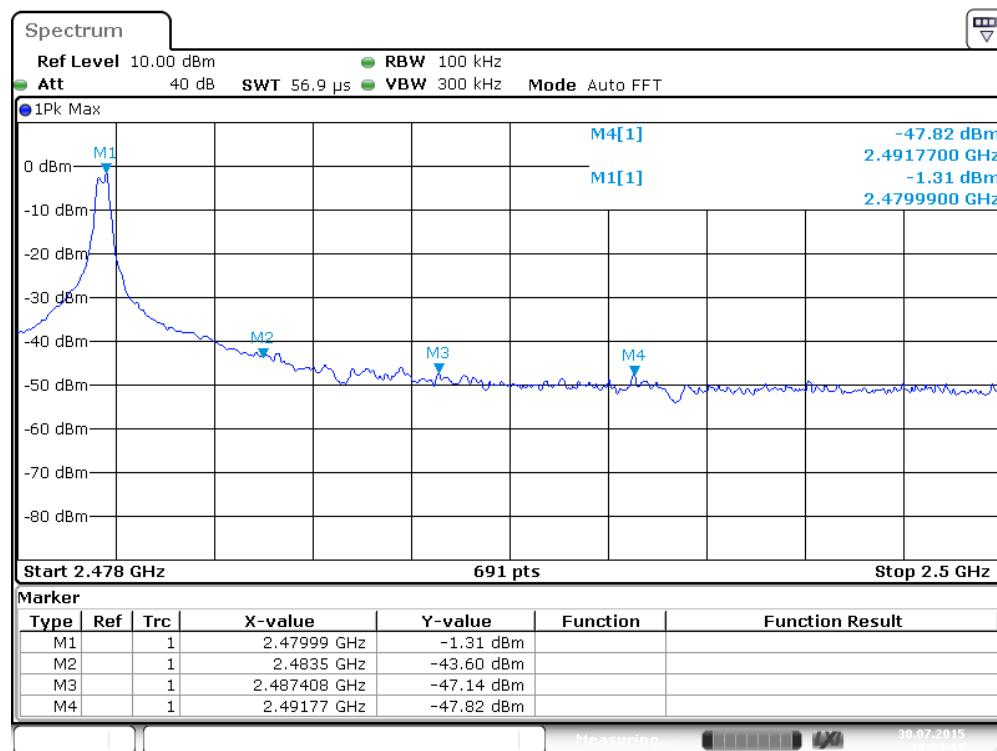


Date: 30.JUL.2015 16:06:27

Figure 31: Test figure of conducted spurious emissions measured in 100kHz Bandwidth, Mode A.3, GFSK Modulation

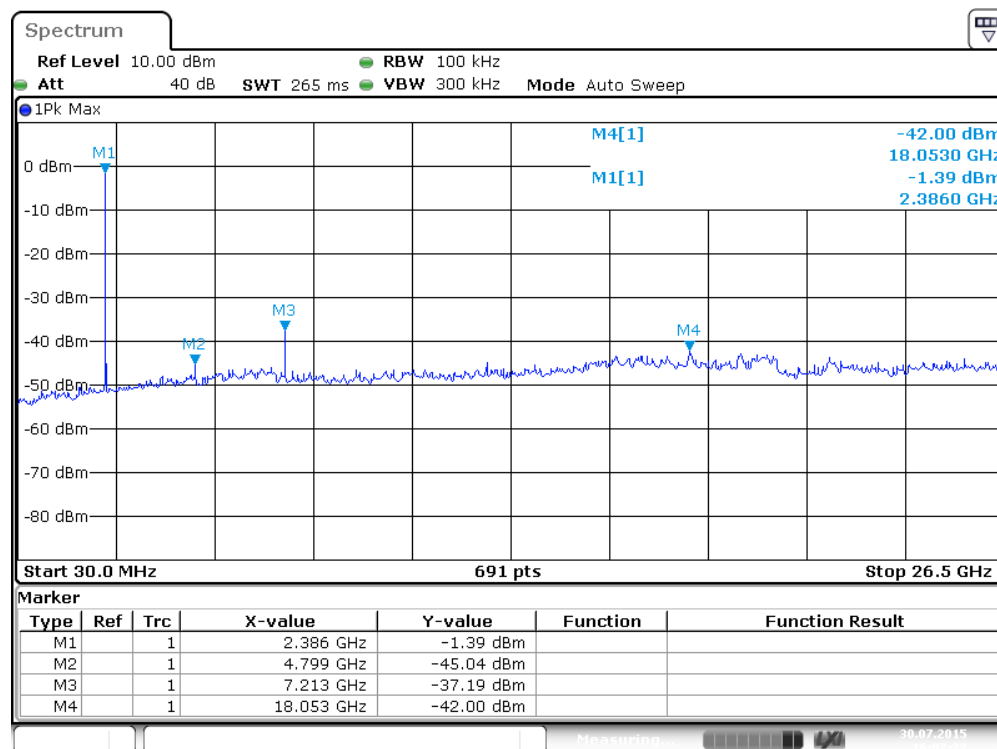


Date: 30.JUL.2015 16:06:54

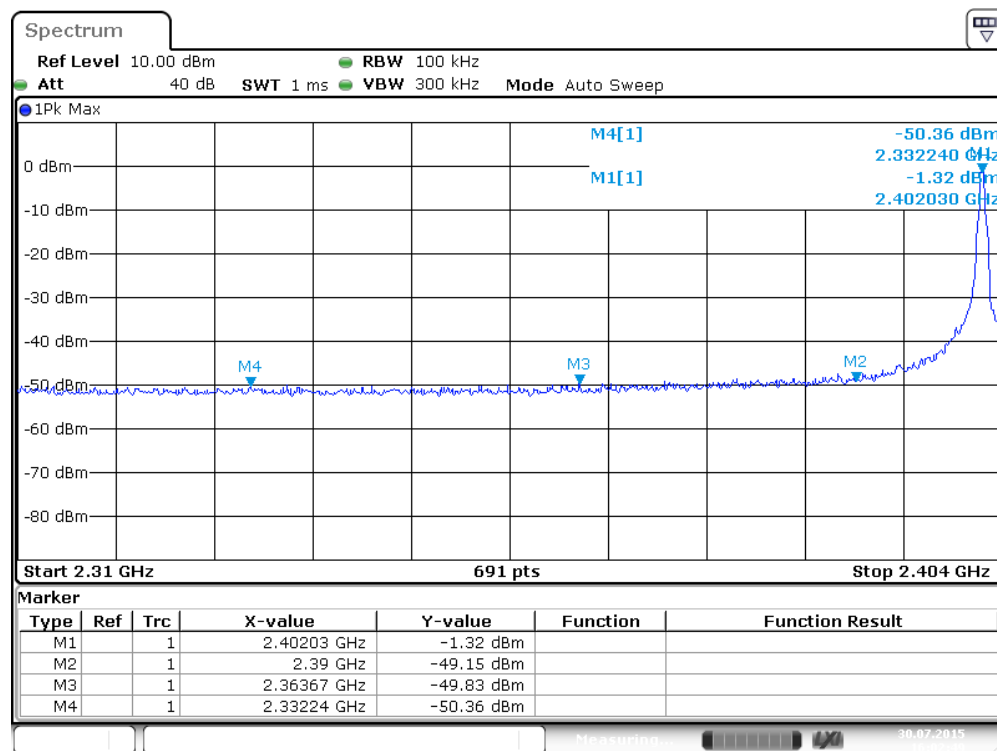


Date: 30.JUL.2015 16:04:19

Figure 32: Test figure of conducted spurious emissions measured in 100kHz Bandwidth, Mode A.1, 8DPSK Modulation

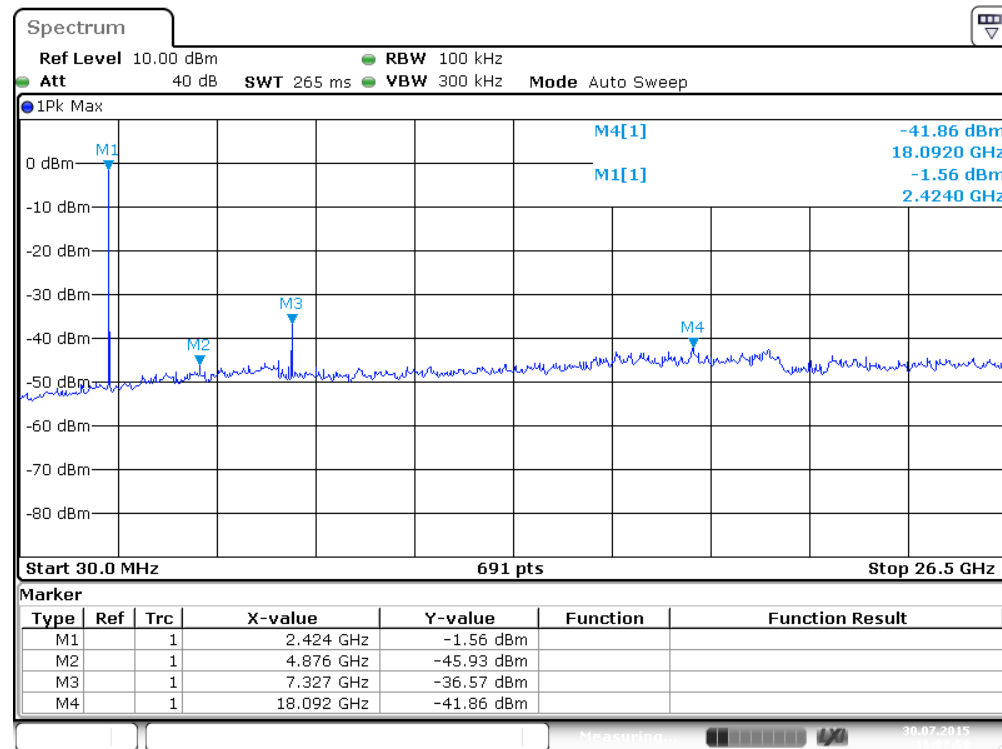


Date: 30.JUL.2015 16:07:22



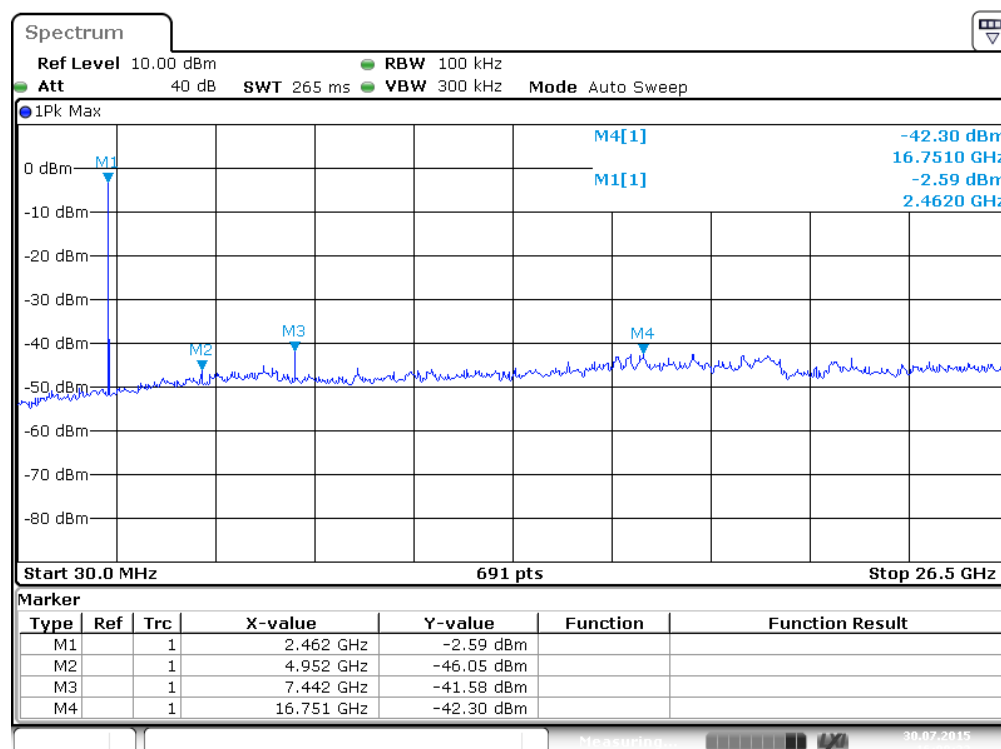
Date: 30.JUL.2015 16:02:49

Figure 33: Test figure of conducted spurious emissions measured in 100kHz Bandwidth, Mode A.2, 8DPSK Modulation

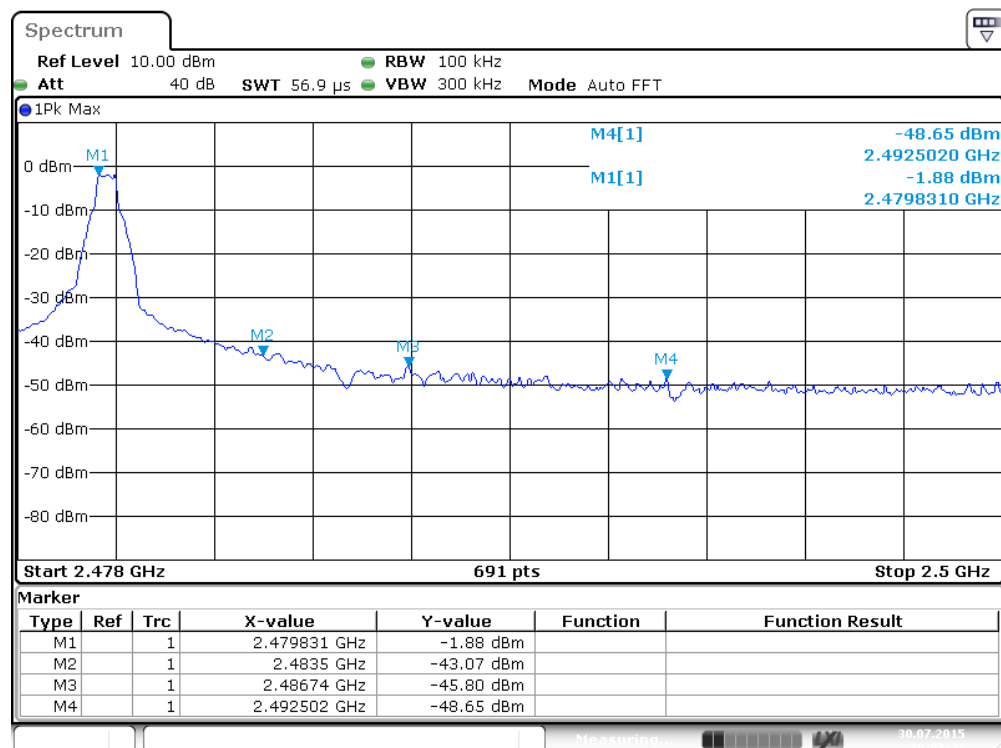


Date: 30.JUL.2015 16:07:50

Figure 34: Test figure of conducted spurious emissions measured in 100kHz Bandwidth, Mode A.3, 8DPSK Modulation



Date: 30.JUL.2015 16:08:22



Date: 30.JUL.2015 16:03:43

Figure 35: Test figure of Conducted emissions, Mode C, D, E, line live

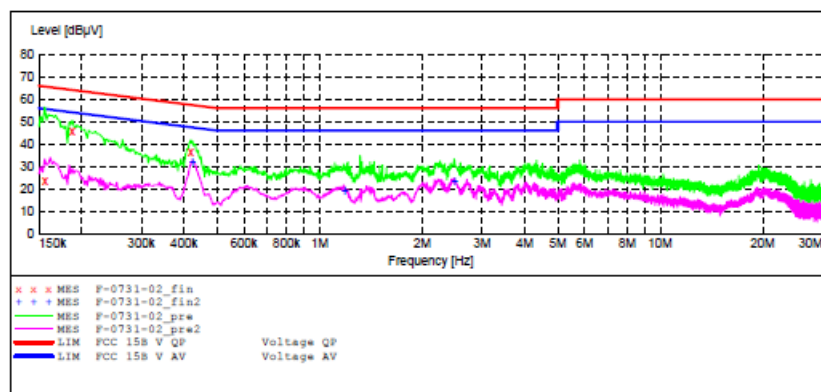
ACCURATE TECHNOLOGY CO., LTD

CONDUCTED EMISSION STANDARD FCC PART 15 B

EUT: HP Wireless Mini Speaker S6500 M/N:BC1101
 Manufacturer: Hewlett Packard
 Operating Condition: Charging
 Test Site: 1#Shielding Room
 Operator: LAN
 Test Specification: L 120V/60Hz
 Comment: Mains Port
 Start of Test: 2015-7-31 /

SCAN TABLE: "V 150K-30MHz fin"

Short Description: SUB STD VIERM2 1.70
 Start Stop Step Detector Meas. IF Transducer
 Frequency Frequency Width Time Bandw.
 150.0 kHz 30.0 MHz 4.5 kHz QuasiPeak 1.0 s 9 kHz NSLK8126 2008
 Average



MEASUREMENT RESULT: "F-0731-02_fin"

Frequency MHz	Level dBμV	Transd dB	Limit dBμV	Margin dB	Detector	Line	PE
0.156000	23.30	10.4	66	42.4	QP	L1	GND
0.188000	45.70	10.6	64	18.4	QP	L1	GND
0.418000	36.30	11.3	58	21.2	QP	L1	GND

MEASUREMENT RESULT: "F-0731-02_fin2"

Frequency MHz	Level dBμV	Transd dB	Limit dBμV	Margin dB	Detector	Line	PE
0.424000	32.20	11.3	47	15.2	AV	L1	GND
1.184000	18.90	11.6	46	27.1	AV	L1	GND
2.490500	23.50	11.7	46	22.5	AV	L1	GND

Figure 36: Test figure of Conducted emissions, Mode C, D, E, line neutral

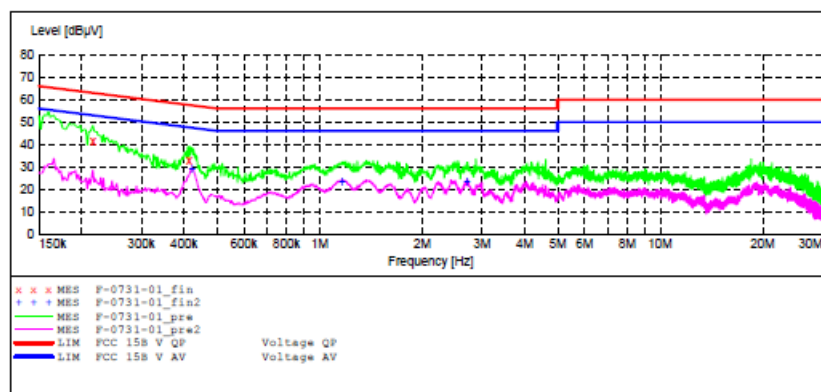
ACCURATE TECHNOLOGY CO., LTD

CONDUCTED EMISSION STANDARD FCC PART 15 B

EUT: HP Wireless Mini Speaker S6500 M/N:BC1101
Manufacturer: Hewlett Packard
Operating Condition: Charging
Test Site: 1#Shielding Room
Operator: LAN
Test Specification: N 120V/60Hz
Comment: Mains Port
Start of Test: 2015-7-31 /

SCAN TABLE: "V 150K-30MHz fin"

Short Description: _SUB_STD_VTERM2 1.70
Start Stop Step Detector Meas. IF Transducer
Frequency Frequency Width Time Bandw.
150.0 kHz 30.0 MHz 4.5 kHz QuasiPeak 1.0 s 9 kHz NSLK8126 2008
Average



MEASUREMENT RESULT: "F-0731-01_fin"

Frequency MHz	Level dBμV	Transd dB	Limit dBμV	Margin dB	Detector	Line	PE
0.160000	-4.10	10.4	66	69.6	QP	N	GND
0.216000	41.40	10.7	63	21.6	QP	N	GND
0.414000	33.00	11.3	58	24.6	QP	N	GND

MEASUREMENT RESULT: "F-0731-01_fin2"

Frequency MHz	Level dBμV	Transd dB	Limit dBμV	Margin dB	Detector	Line	PE
0.422000	29.10	11.3	47	18.3	AV	N	GND
1.164000	23.60	11.6	46	22.4	AV	N	GND
2.706500	23.30	11.7	46	22.7	AV	N	GND

Figure 37: Test figure of Radiated emissions, Mode C, Below 1GHz, Horizontal

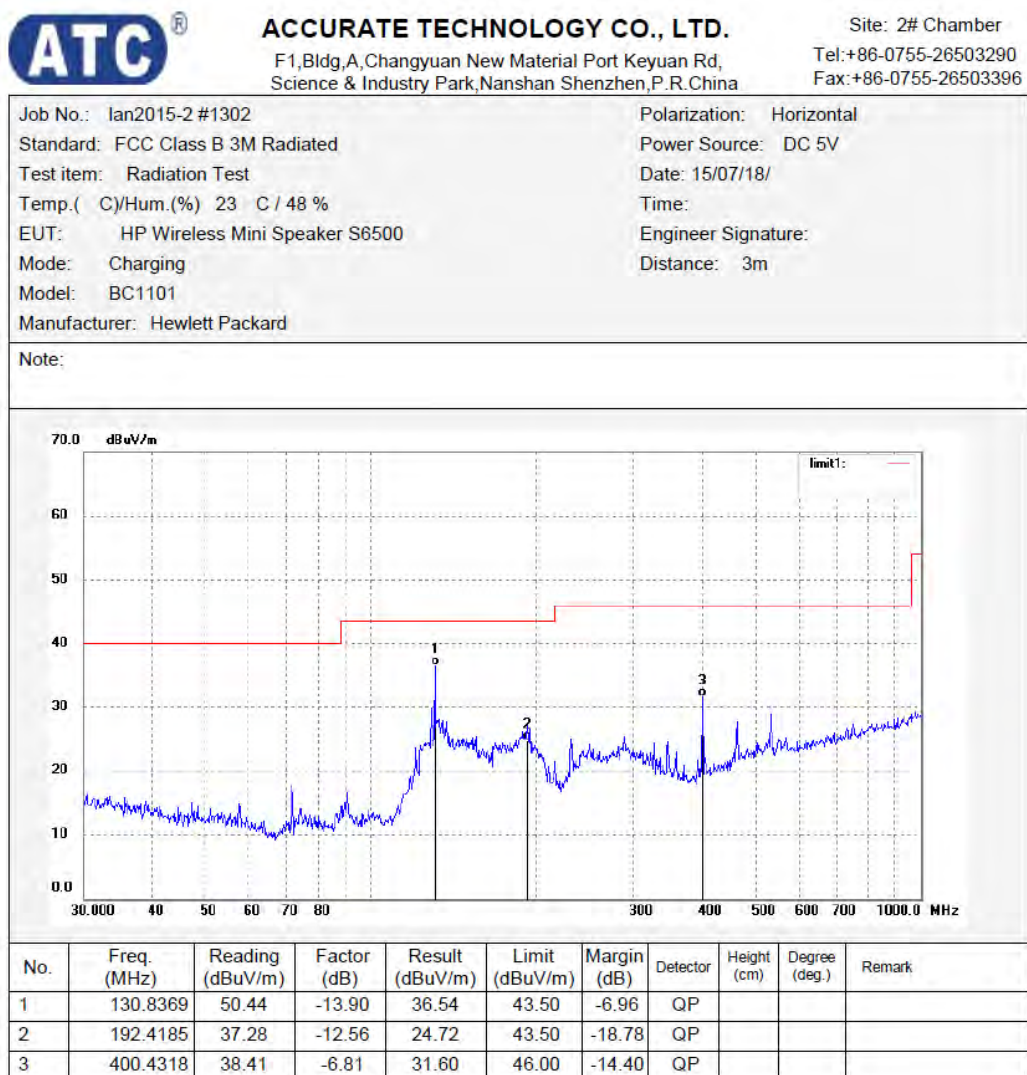


Figure 38: Test figure of Radiated emissions, Mode C, Below 1GHz, Vertical

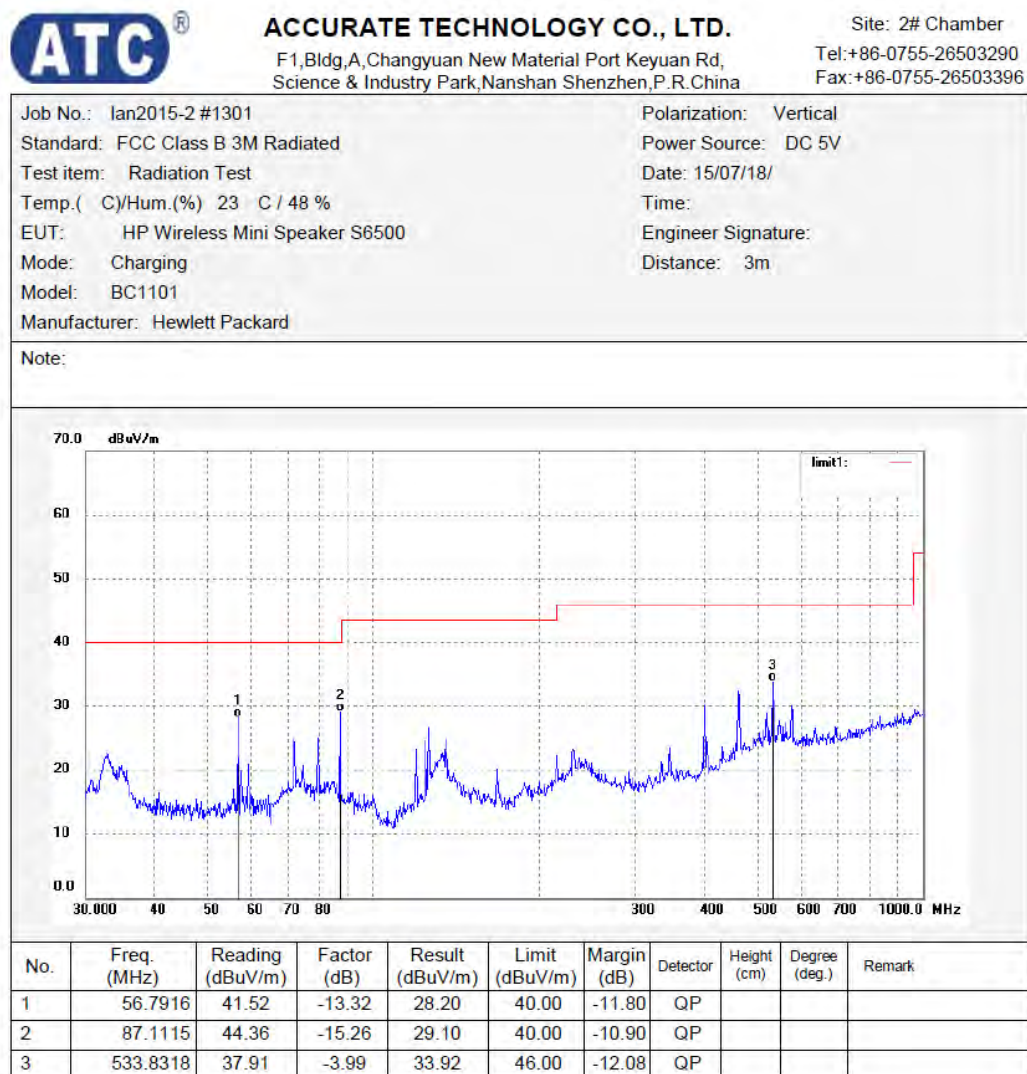


Figure 39: Test figure of Radiated emissions, Mode C, Above 1GHz, Horizontal

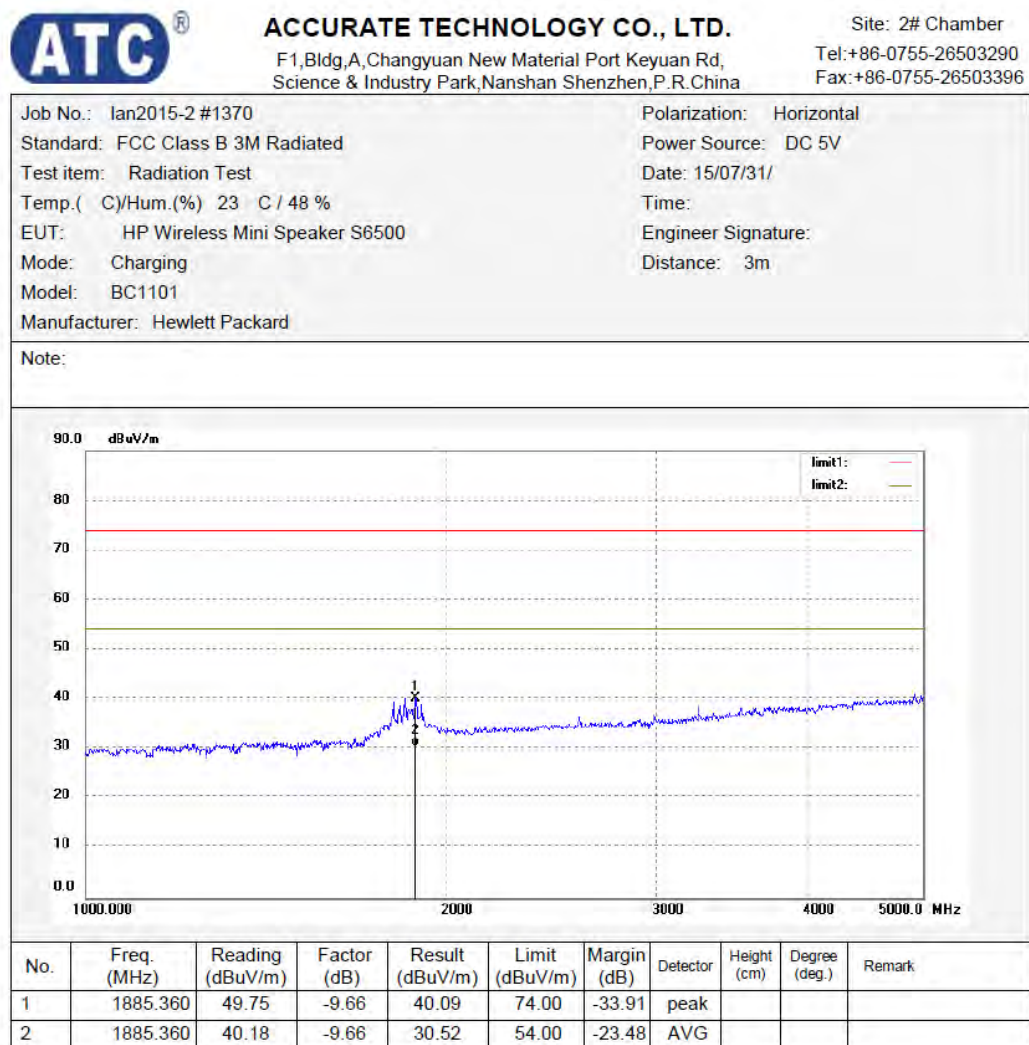


Figure 40: Test figure of Radiated emissions, Mode C, Above 1GHz, Vertical

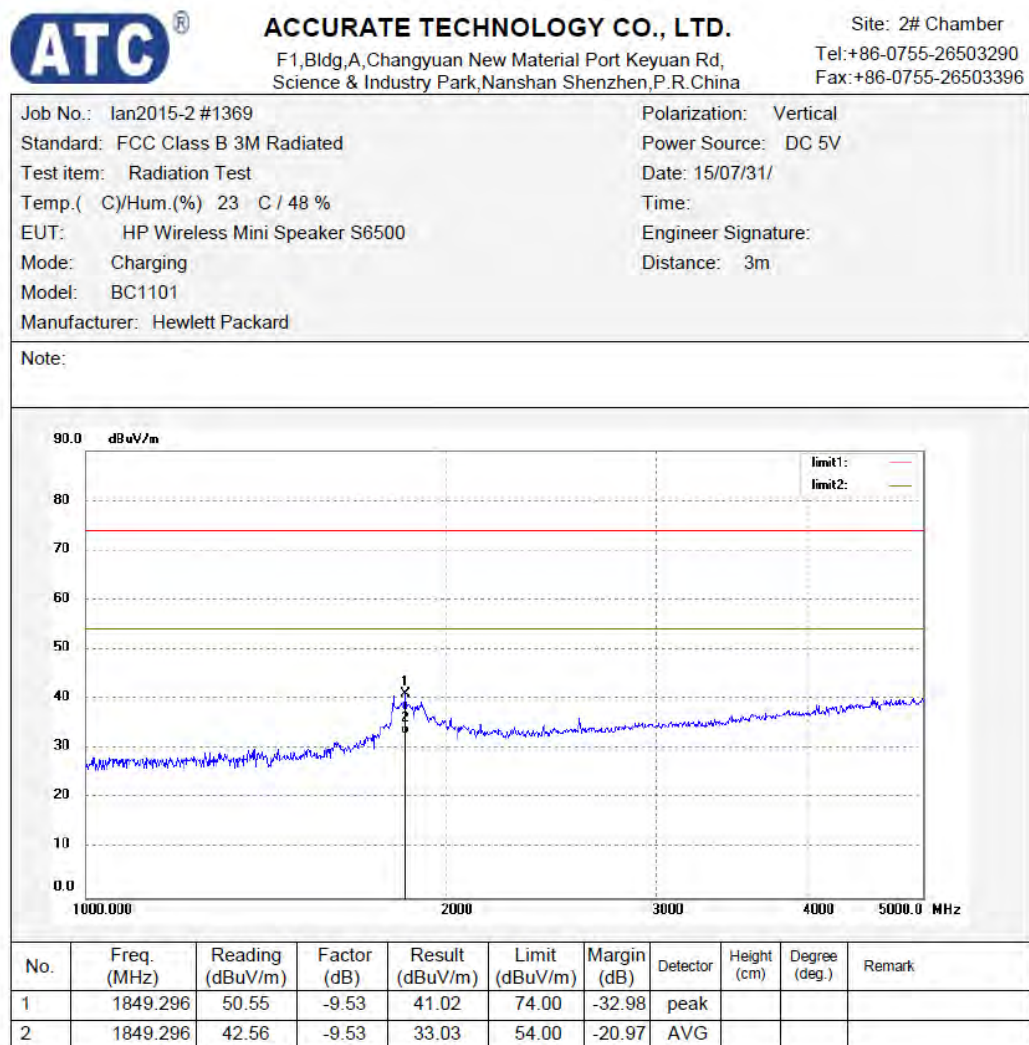


Figure 41: Test figure of Radiated emissions, Mode D, Below 1GHz, Horizontal

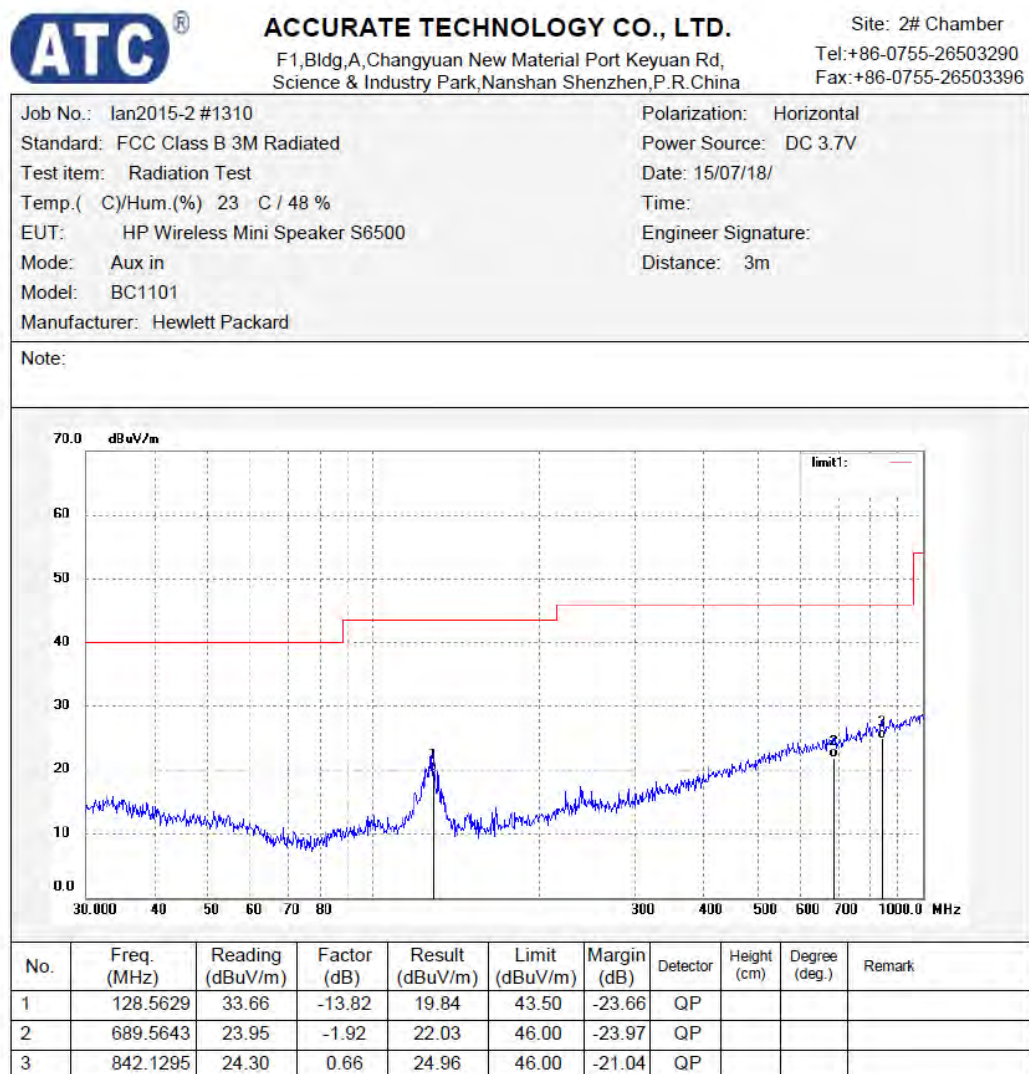


Figure 42: Test figure of Radiated emissions, Mode D, Below 1GHz, Vertical

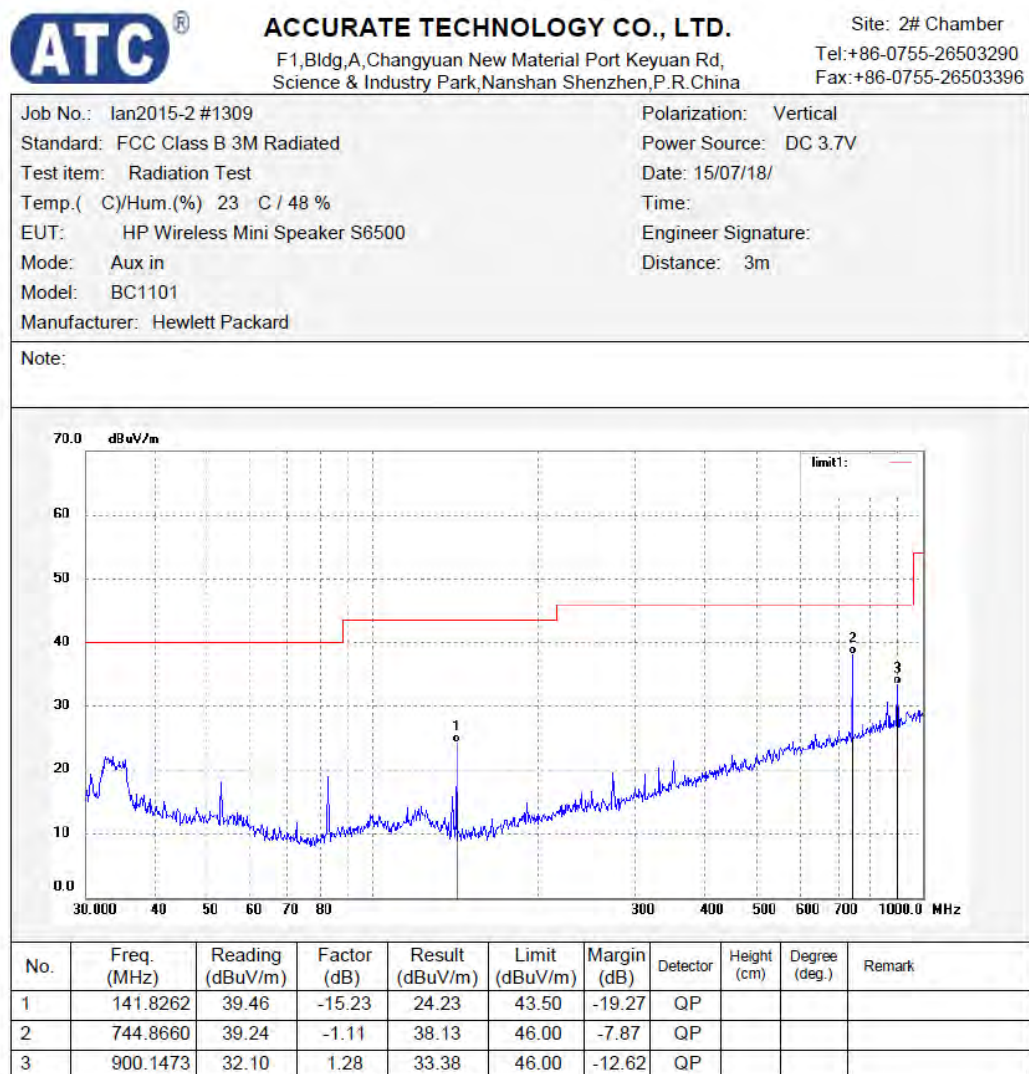


Figure 43: Test figure of Radiated emissions, Mode D, Above 1GHz, Horizontal

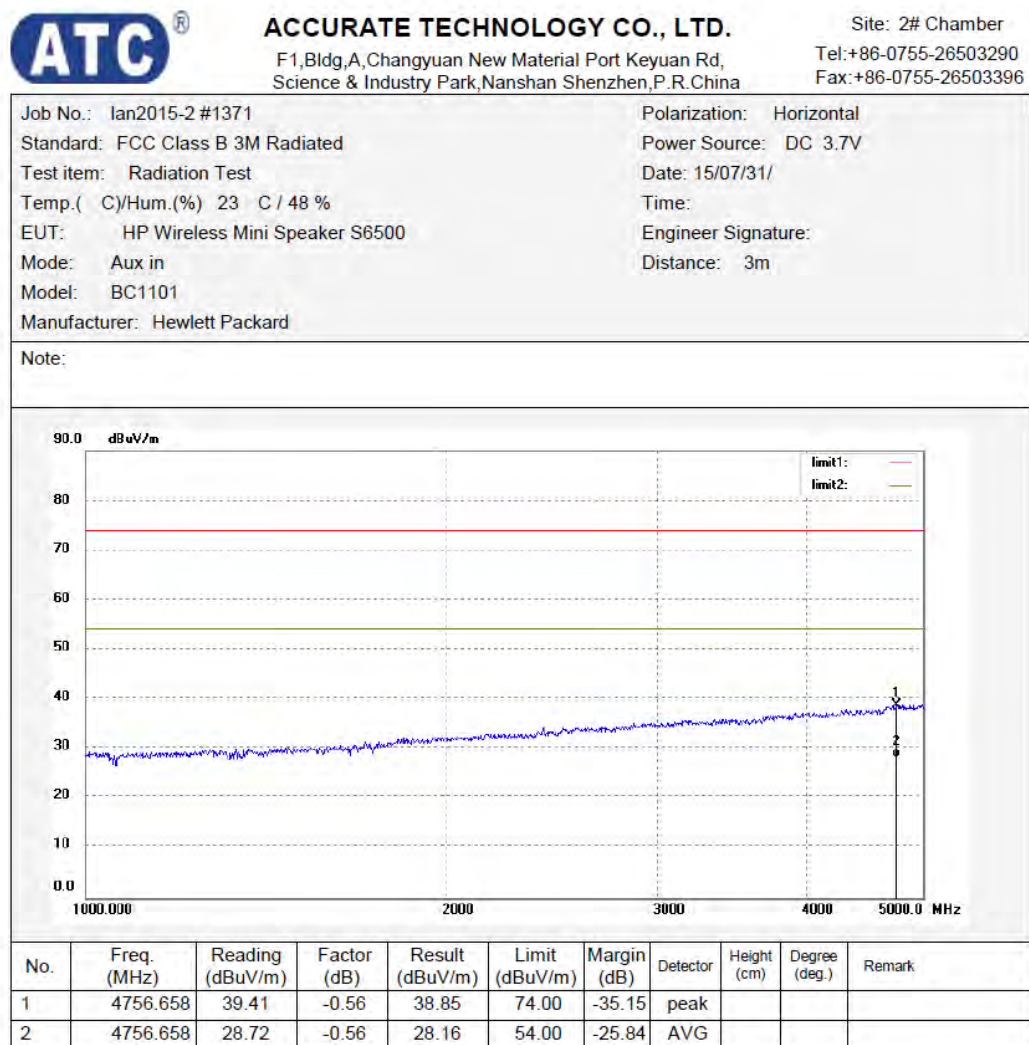


Figure 44: Test figure of Radiated emissions, Mode D, Above 1GHz, Vertical

