

Report No.: C161121Z01-F

# FCC 47 CFR PART 15 SUBPART B TEST REPORT

for

900MHz Wireless Headphone

Model: HP5990A, HP5990, HP5990J, HP5990AJ

**Brand: ARKON** 

Test Report Number: C161121Z01-F

Issued for:

Uni-Art Precise Products Ltd 11-12/F., Yue Xiu Ind'1 Bldg., 87 Hung To Road, Kwun Tong, Kowloon, Hong Kong

Issued by:

## **COMPLIANCE CERTIFICATION SERVICES (SHENZHEN) INC.**

No.10-1, Mingkeda Logistics Park, NO.18, Huanguan South Rd., Guan Lan Town, Baoan District, Shenzhen China

TEL: 86-755-28055000 FAX: 86-755-28055221

E-Mail: service@ccssz.com

Issued Date: December 27, 2016





中国认可 国际互认 检测 TESTING CNAS L4818



**Note:** This report shall not be reproduced except in full, without the written approval of Compliance Certification Services(Shenzhen) Inc.. This document may be altered or revised by Compliance Certification Services(Shenzhen) Inc.. personnel only, and shall be noted in the revision section of the document. The client should not use it to claim product endorsement by TAF, A2LA, NVLAP, NIST or any government agencies. The test result of this report relate only to the tested sample identified in this report.

FCC ID: MVAHP5992-001R



Report No: C161121Z01-F

## **Revision History**

Rev.	Issue Date	Revisions	Effect Page	Revised By
00	December 27, 2016	Initial Issue	ALL	Amzula Chen

## TABLE OF CONTENTS

1	TEST RESULT CERTIFICATION	4
2	EUT DESCRIPTION	5
3	TEST METHODOLOGY	
3.1.	DECISION OF FINAL TEST MODE	6
3.2.	EUT SYSTEM OPERATION	
4	SETUP OF EQUIPMENT UNDER TEST	7
4.1.	DESCRIPTION OF SUPPORT UNITS	7
4.2.	CONFIGURATION OF SYSTEM UNDER TEST	7
5	FACILITIES AND ACCREDITATIONS	8
5.1.	FACILITIES	
5.2.	ACCREDITATIONS	8
5.3.	MEASUREMENT UNCERTAINTY	8
6	CONDUCTED EMISSION MEASUREMENT	9
6.1.	LIMITS OF CONDUCTED EMISSION MEASUREMENT	9
6.2.	TEST INSTRUMENTS	9
6.3.	TEST PROCEDURES	
6.4.	TEST SETUP	
6.5.	DATA SAMPLE	
6.6.	TEST RESULTS	
7	RADIATED EMISSION MEASUREMENT	
7.1.	LIMITS OF RADIATED EMISSION MEASUREMENT	
7.2.	TEST INSTRUMENTS	
7.3.	TEST PROCEDURES	
7.4.	TEST SETUP	
7.5.	DATA SAMPLE	
76	TEST RESULTS	20

## 1 TEST RESULT CERTIFICATION

Product:	900MHz Wireless Headphone	
Model:	HP5990A, HP5990, HP5990AJ	
Brand:	ARKON	
Applicant:	Uni-Art Precise Products Ltd 11-12/F., Yue Xiu Ind'1 Bldg., 87 Hung To Road, Kwun Tong, Kowloon, Hong Kong	
Manufacturer:	ARKON ELECTRONICS(HUIZHOU)CO.,LIMITED  NO.4 Taihao Road, High-tech Industrial Park, Sandong Town, Huicheng District, Huizhou, Guangdong, China	
Tested:	November 21~December 27, 2016	
Test Voltage:	DC3.7V	

EMISSION						
Standard Item Result Remarks						
FCC 47 CFR Part 15 Subpart B	Conducted (Power Port)	PASS	Meet Class B limit			
ANSI C63.4: 2014	Radiated	PASS	Meet Class B limit			

Note: 1. The statements of test result on the above are decided by the request of test standard only; the measurement uncertainties are not factored into this compliance determination.

2. The information of measurement uncertainty is available upon the customer's request.

Deviation from Applicable Standard	
None	

The above equipment has been tested by Compliance Certification Services(Shenzhen) Inc. and found compliance with the requirements set forth in the technical standards mentioned above. The results of testing in this report apply only to the product/system, which was tested. Other similar equipment will not necessarily produce the same results due to production tolerance and measurement uncertainties.

Approved by:

Reviewed by:

Sunday Hu

Supervisor of EMC Dept.

Sunday. Mu

**Compliance Certification Service(Shenzhen)** 

Inc.

**Ruby Zhang** 

Supervisor of Report Dept.

Compliance Certification Service(Shenzhen)

Inc.

## **2 EUT DESCRIPTION**

Product	900MHz Wireless Headphone
Model	HP5990A, HP5990, HP5990J, HP5990AJ
Brand	ARKON
Applicant	Uni-Art Precise Products Ltd
Housing material	Plastic
EUT Type	<ul><li>☐ Engineering Sample, ⊠ Product Sample,</li><li>☐ Mass Product Sample.</li></ul>
Identify Number	C161121Z01-F
<b>EUT Power Rating</b>	DC3.7V supplied by the battery
Battery Model No.	552035, 3.7Vdc, 350mAh, 1.295Wh
Received Date	December 21, 2016
EUT Max. Operating Frequency	900MHz

## I/O Port EUT

I/O PORT TYPES		Q'TY	TESTED WITH	
1).	Audio Port	1	Earphone	

**FCC ID: MVAHP5992-001R** 

## 3 TEST METHODOLOGY

### 3.1. DECISION OF FINAL TEST MODE

The EUT was tested together with the above additional components, and a configuration, which produced the worst emission levels, was selected and recorded in this report.

Pre-Test Mo	Pre-Test Mode		
Emission	Conducted Emission	Mode 1: Charge	
EIIIISSIOII	Radiated Emission	Mode 1: Normal	

After the preliminary scan, the following test mode was found to produce the highest emission level.

Final Test M	Final Test Mode		
	Conducted	Mode 1	
Emission	Emission		
EIIIISSIUII	Radiated		
	Emission	Mode 1	

Then, the above highest emission mode of the configuration of the EUT and cable was chosen for all final test items.

### 3.2. EUT SYSTEM OPERATION

- 1 Setup the EUT and simulators as shown on 4.2.
- 2 Turn on the power of all equipment.
- 3 Run the program to test.

## 4 SETUP OF EQUIPMENT UNDER TEST

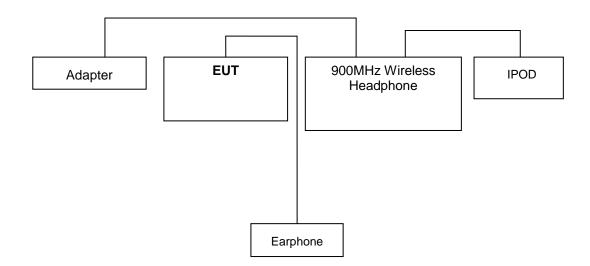
## 4.1. DESCRIPTION OF SUPPORT UNITS

The EUT has been tested as an independent unit together with other necessary accessories or support units. The following support units or accessories were used to form a representative test configuration during the tests.

	9 100.10						
No.	Equipment	Model No.	Serial No.	FCC ID	Brand	Data Cable	Power Cord
1	Earphone	ST909	N/A	N/A	Shengli	Unshielded 1.80m	N/A
2	900MHz Wireless Headphone (Transmitter)	HP5990A	N/A	MVAHP5990 -001R	ARKON	N/A	N/A
3	IPOD	A1285	YM908BY U3QX	N/A	APPLE	Unshielded 1.80m	N/A
4	Adapter	YLJXA-T08 0040	N/A	N/A	N/A	Unshielded 1.70m	N/A

**Note:** Grounding was established in accordance with the manufacturer's requirements and conditions for the intended use.

### 4.2. CONFIGURATION OF SYSTEM UNDER TEST



## 5 FACILITIES AND ACCREDITATIONS

#### 5.1. FACILITIES

All measurement facilities used to collect the measurement data are located at No.10-1, Mingkeda Logistics Park, No.18, Huanguan South Rd., Guan Lan Town, Baoan District, Shenzhen, China

The sites are constructed in conformance with the requirements of ANSI C63.4 and CISPR 22. All receiving equipment conforms to CISPR 16-1-1, CISPR 16-1-2, CISPR 16-1-3, CISPR 16-1-4, CISPR 16-1-5.

### 5.2. ACCREDITATIONS

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

USA A2LA China CNAS

The measuring facility of laboratories has been authorized or registered by the following approval agencies.

USA FCC

Japan VCCI (C-4815,R-4320,T-2317,G-10624)

Canada INDUSTRY CANADA

Copies of granted accreditation certificates are available for downloading from our web site, <a href="http://www.ccssz.com">http://www.ccssz.com</a>

#### 5.3. 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
Con	ducted Emissions	9kHz~30MHz	+/-3.2878dB
		30 MHz ~200 MHz	+/-3.8928dB
Radiated	Test Site: 966(2)	200 MHz ~1000 MHz	+/-3.8753dB
Emission (3m)		1GHz ~8GHz	+/-5.3112dB
		8GHz~18GHz	+/-5.3493dB

This uncertainty represents an expanded uncertainty expressed at approximately the 95% confidence level using a coverage factor of k=2.

Consistent with industry standard determining compliance with the limits shall be base on the results of the compliance measurement. Consequently the measure emissions being less than the maximum allowed emission result in this be a compliant test or passing test.

The acceptable measurement uncertainty value without requiring revision of the compliance statement is base on conducted and radiated emissions being less than  $U_{CISPR}$  which is 3.6dB and 5.2dB respectively. CCS values (called  $U_{Lab}$  in CISPR 16-4-2) is less than  $U_{CISPR}$  as shown in the table above. Therefore, MU need not be considered for compliance.

## 6 CONDUCTED EMISSION MEASUREMENT

## 6.1. LIMITS OF CONDUCTED EMISSION MEASUREMENT

FREQUENCY (MHz)	Class A	A (dBuV)	Class B (dBuV)		
FREQUENCY (MHZ)	Quasi-peak	Average	Quasi-peak	Average	
0.15 - 0.5	79	66	66 - 56	56 - 46	
0.50 - 5.0	73	60	56	46	
5.0 - 30.0	73	60	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 0.15 to 0.50 MHz.
- (3) All emanations from a class A/B digital device or system, including any network of conductors and apparatus connected thereto, shall not exceed the level of field strengths specified above.

### 6.2. TEST INSTRUMENTS

	Conducted Emission Test Site						
Name of Equipment	Manufacturer	Model Number	Serial Number	Last Calibration	Due Calibration		
ESCI EMI TEST RECEIVER.ESCI	ROHDE&SCHWARZ	ESCI	100783	02/21/2016	02/20/2017		
LISN(EUT)	ROHDE&SCHWARZ	ENV216	101543	02/21/2016	02/20/2017		
LISN	EMCO	3825/2	8901-1459	02/21/2016	02/20/2017		
Temp. / Humidity Meter	VICTOR	VC230	N/A	02/21/2016	02/20/2017		
Test S/W	FARAD		EZ-EMC/ CCS-3A	1-CE			

**NOTE:** 1. The calibration interval of the above test instruments is 12 months and the calibrations are traceable to NML/ROC and NIST/USA.

2. N.C.R = No Calibration Request.

## **6.3. TEST PROCEDURES** (please refer to measurement standard or CCS SOP PA-031)

Report No: C161121Z01-F

## **Procedure of Preliminary Test**

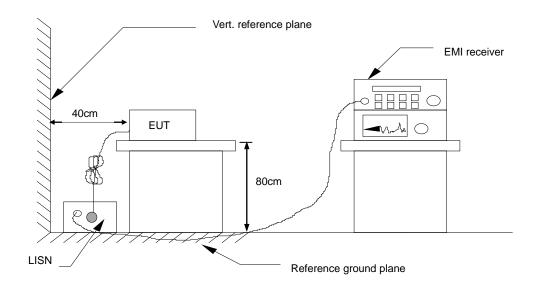
- The EUT and support equipment, if needed, were set up as per the test configuration to simulate typical usage per the user's manual. When the EUT is a tabletop system, a wooden table with a height of 0.8 meters is used and is placed on the ground plane as per ANSI C63.4 (see Test Facility for the dimensions of the ground plane used). When the EUT is a floor standing equipment, it is placed on the ground plane, which has a 12 mm non-conductive covering to insulate the EUT from the ground plane.
- All I/O cables were positioned to simulate typical actual usage as per ANSI C63.4.
- The test equipment EUT received battery.
- The test program of the EUT was started. Emissions were measured on each current carrying line of the EUT using an EMI Test Receiver connected to the LISN powering the EUT.
- The Receiver scanned from 150kHz to 30MHz for emissions in each of the test modes.
- During the above scans, the emissions were maximized by cable manipulation.
- The test mode(s) described in Item 3.1 were scanned during the preliminary test.
- After the preliminary scan, we found the test mode described in Item 3.1 producing the highest emission level.
- The worst configuration of EUT and cable of the above highest emission level 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, Line 1 and Line 2, 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.



## 6.4. TEST SETUP



 For the actual test configuration, please refer to the related item – Photographs of the Test Configuration.

## 6.5. DATA SAMPLE

Frequency (MHz)		Average Reading (dBuV)		QuasiPeak Result (dBuV)	Average Result (dBuV)	QuasiPeak Limit (dBuV)	Average Limit (dBuV)	QuasiPeak Margin (dB)	Margin	Remark (Pass/Fail)
X.XXXX	32.69	25.65	11.52	44.21	37.17	65.78	55.79	-21.57	-18.62	Pass

Factor = Insertion loss of LISN + Cable Loss

Result = Quasi-peak Reading/ Average Reading + Factor

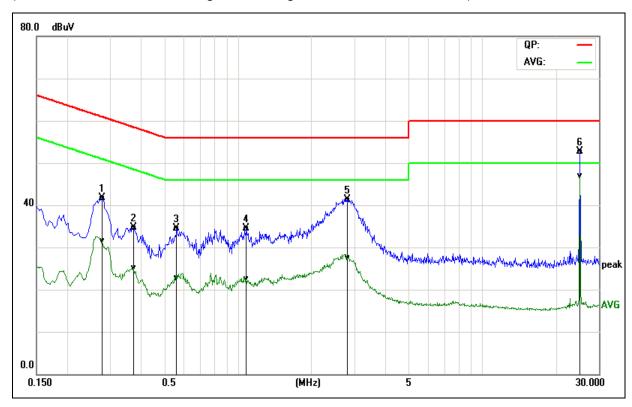
Limit = Limit stated in standard Margin = Result (dBuV) – Limit (dBuV)



6.6. TEST RESULTS

Model No.	HP5990A	RBW,VBW	9 kHz
Environmental Conditions	22°C, 45% RH	Test Mode	Mode 1
Tested By	Saber Huang	Line	L1
Tested Date	2016/12/09		

(The chart below shows the highest readings taken from the final data.)



Frequency					•	QuasiPeak	_		•	Remark
(MHz)	Reading (dBuV)	Reading (dBuV)	Factor (dB)	Result (dBuV)	Result (dBuV)	Limit (dBuV)	Limit (dBuV)	Margin (dB)	Margin (dB)	(Pass/Fail)
0.2779	21.98	11.96	19.64	41.62	31.60	60.88	50.88	-19.26	-19.28	Pass
0.3740	15.01	5.50	19.63	34.64	25.13	58.41	48.41	-23.77	-23.28	Pass
0.5620	14.78	2.98	19.68	34.46	22.66	56.00	46.00	-21.54	-23.34	Pass
1.0859	14.92	2.84	19.66	34.58	22.50	56.00	46.00	-21.42	-23.50	Pass
2.8220	21.70	7.89	19.69	41.39	27.58	56.00	46.00	-14.61	-18.42	Pass
25.1460	32.86	26.91	19.94	52.80	46.85	60.00	50.00	-7.20	-3.15	Pass

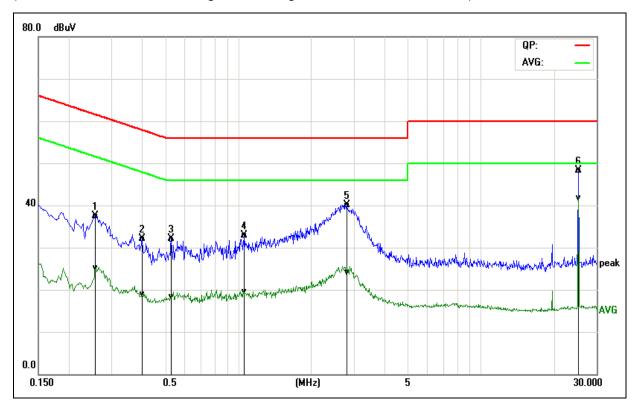
**NOTE:** L1 = Line One (Live Line)



Report No: C161121Z01-F

Model No.	HP5990A	RBW,VBW	9 kHz
Environmental Conditions	22°C, 45% RH	Test Mode	Mode 1
Tested By	Saber Huang	Line	L2
Tested Date	2016/12/09		

(The chart below shows the highest readings taken from the final data.)



Frequency	QuasiPeak					QuasiPeak	_		· ·	Remark
(MHz)	Reading (dBuV)	Reading (dBuV)	Factor (dB)	Result (dBuV)	Result (dBuV)	Limit (dBuV)	Limit (dBuV)	Margin (dB)	Margin (dB)	(Pass/Fail)
0.2580	17.84	5.48	19.72	37.56	25.20	61.49	51.50	-23.93	-26.30	Pass
0.4020	12.38	-0.83	19.66	32.04	18.83	57.81	47.81	-25.77	-28.98	Pass
0.5299	12.36	-1.30	19.64	32.00	18.34	56.00	46.00	-24.00	-27.66	Pass
1.0620	13.24	-0.18	19.74	32.98	19.56	56.00	46.00	-23.02	-26.44	Pass
2.8020	20.47	4.44	19.72	40.19	24.16	56.00	46.00	-15.81	-21.84	Pass
25.2180	28.54	21.96	19.84	48.38	41.80	60.00	50.00	-11.62	-8.20	Pass

**NOTE:** L2 = Line Two (Neutral Line).

## 7 RADIATED EMISSION MEASUREMENT

## 7.1. LIMITS OF RADIATED EMISSION MEASUREMENT

#### **Below 1GHz**

FREQUENCY (MHz)	dBuV/m (At 10m)	dBuV/m (At 3m)
	Class A	Class B
30 ~ 88	39.00	40.00
88 ~ 216	43.50	43.50
216 ~ 960	46.40	46.00
960 ~ 1000	49.50	54.00

#### NOTE:

- (1) The lower limit shall apply at the transition frequencies.
- (2) Emission level (dBuV/m) = 20 log Emission level (uV/m).

#### **Above 1GHz**

Frequency	Class A (d	dBuV/m)	Class B (dBuV/m)		
(MHZ)	Average	Peak	Average	Peak	
Above 1000	60	80	54	74	

#### Notes:

- (1) The lower limit shall apply at the transition frequencies.
- (2) Emission level (dBuV/m) = 20 log Emission level (uV/m).
- (3) All emanation from a class A/B digital device or system, including any network of conductors and apparatus connected thereto, shall not exceed the level of field strengths specified above.

According to FCC Part 15.33 (b), for an unintentional radiator, including a digital device, the spectrum shall be investigated from the lowest radio frequency signal generated or used in the device, without going below the lowest frequency for which a radiated emission limit is specified, up to the frequency shown in the following table:

Highest frequency generated or used in the device or in which the device operated or tunes (MHz)	Upper frequency of measurement range (MHz)
Below 1.705	30
1.705-108	1000
108-500	2000
500-1000	5000
Above 1000	5 <sup>th</sup> harmonic of the highest frequency or 40GHz, whichever is lower

Report No: C161121Z01-F

15.38 (b) (11)Third Edition of the International Special Committee on Radio Interference (CISPR), Pub. 22, "Information Technology Equipment – Radio Disturbance Characteristics – Limits and Methods of Measurement," 1997, IBR approved for § 15.109.

#### **Below 1GHz**

EDECLIENCY (MH-)	dBuV/m (At 10m)				
FREQUENCY (MHz)	Class A	Class B			
30 ~ 230	40	30			
230 ~ 1000	47	37			

#### **Above 1GHz**

Frequency	Class A (dBu	V/m) (At 3m)	Class B (dBuV/m) (At 3m)		
(GHz)	Average	Peak	Average	Peak	
1~3	56	76	50	70	
3~6	60	80	54	74	

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

- (2) Emission level  $(dBuV/m) = 20 \log Emission level (uV/m)$ .
- (3) All emanation from a class A/B digital device or system, including any network of conductors and apparatus connected thereto, shall not exceed the level of field strengths specified above.

According to CISPR22 clause 6.3, the measurement frequency range shown in the following table:

Tollowing table.	
Highest frequency generated or used in the device or on which the device operates or tunes (MHz)	I I INNAT TRANIJANOV OT MASCIITAMANT TSNAA
Less than 108	1000
108-500	2000
500-1000	5000
Above 1000	5 times of the highest frequency or 6GHz, whichever is less



Report No: C161121Z01-F

## 7.2. TEST INSTRUMENTS

Radiated Emission Test Site 966 (2)								
Name of Equipment	Manufacturer	Model Number	Serial Number	Last Calibration	Due Calibration			
PSA Series Spectrum Analyzer	Agilent	E4446A	US44300399	02/21/2016	02/20/2017			
EMI TEST RECEIVER	ROHDE&SCHWARZ	ESCI	101210	02/21/2016	02/20/2017			
Turn Table	N/A	N/A	N/A	N.C.R	N.C.R			
Controller	Sunol Sciences	SC104V	022310-1	N.C.R	N.C.R			
Controller	СТ	N/A	N/A	N.C.R	N.C.R			
High Noise Amplifier	Agilent	8449B	3008A01838	02/21/2016	02/20/2017			
Board-Band Horn Antenna	Schwarzbeck	BBHA 9170	9170-497	07/10/2016	07/09/2017			
Horn Antenna	SCHWARZBECK	BBHA9120	D286	03/01/2016	03/01/2017			
Temp. / Humidity Meter	Anymetre	JR913	N/A	02/21/2016	02/20/2017			
Antenna Tower	SUNOL	TLT2	N/A	N.C.R	N.C.R			
Test S/W	FARAD		LZ-RF / CC	S-SZ-3A2				

**NOTE:** 1. The calibration interval of the above test instruments is 12 months and the calibrations are traceable to NML/ROC and NIST/USA.

2. N.C.R = No Calibration Request.

## **7.3. TEST PROCEDURES** (please refer to measurement standard or CCS SOP PA-031)

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

- The equipment was set up as per the test configuration to simulate typical usage per the user's manual. When the EUT is a tabletop system, a wooden turntable with a height of 0.8 meters is used which is placed on the ground plane. When the EUT is a floor standing equipment, it is placed on the ground plane which has a non-conductive covering to insulate the EUT from the ground plane.
- Support equipment, if needed, was placed as per ANSI C63.4.
- All I/O cables were positioned to simulate typical usage as per ANSI C63.4.
- The test equipment EUT received battery.
- The antenna was placed at 3 meter away from the EUT as stated in ANSI C63.4.
   The antenna connected to the Spectrum Analyzer via a cable and at times a pre-amplifier would be used.
- The Analyzer / Receiver quickly scanned from 30MHz to 40GHz. The EUT test program was started. Emissions were scanned and measured rotating the EUT to 360 degrees and positioning the antenna 1 to 4 meters (For Below 1GHz) or 1 meter (For Above 1GHz) above the ground plane, in both the vertical and the horizontal polarization, to maximize the emission reading level.
- The test mode(s) described in Item 3.1 were scanned during the preliminary test:
- After the preliminary scan, we found the test mode described in Item 3.1 producing the highest emission level.
- The worst configuration of EUT and cable of the above highest emission level were recorded for reference of the final test.

### **Procedure of Final Test**

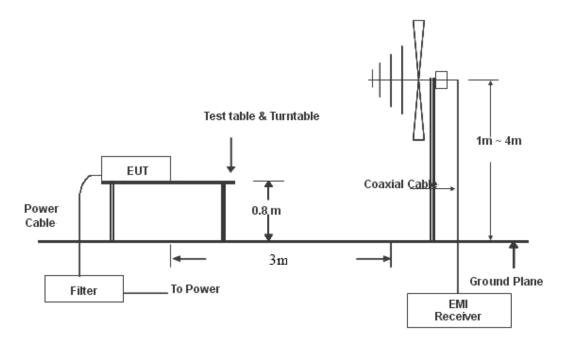
- EUT and support equipment were set up on the turntable as per the configuration with highest emission level in the preliminary test.
- The Analyzer / Receiver scanned from 30MHz to 40GHz. Emissions were scanned and measured rotating the EUT to 360 degrees, varying cable placement and positioning the antenna 1 or 1 to 4 meters above the ground plane, in both the vertical and the horizontal polarization, to maximize the emission reading level.
- Recording at least the 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 Q.P. (For Below 1GHz) or Peak/Average (For Above 1GHz) reading is presented.
- The test data of the worst-case condition(s) was recorded.



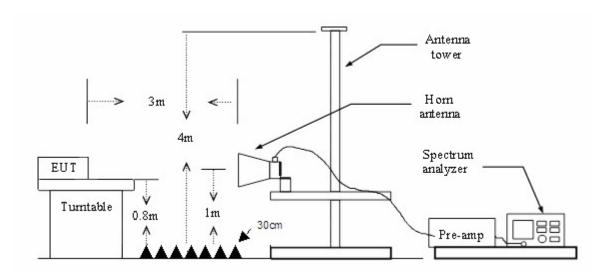
Report No: C161121Z01-F

## 7.4. TEST SETUP

#### **Below 1GHz**



#### **Above 1GHz**



 For the actual test configuration, please refer to the related item – Photographs of the Test Configuration.

Report No: C161121Z01-F

### 7.5. DATA SAMPLE

#### **Below 1GHz**

Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
XXX.XXXX	47.40	-21.61	25.79	40.00	-14.21	QP

Frequency (MHz) = Emission frequency in MHz

Reading (dBuV) = Uncorrected Analyzer / Receiver reading Correct Factor (dB/m) = Antenna factor + Cable loss – Amplifier gain Result (dBuV/m) = Reading (dBuV) + Corr. Factor (dB/m)

Limit (dBuV/m) = Limit stated in standard

Margin (dB) = Result (dBuV/m) – Limit (dBuV/m)

Q.P. = Quasi-peak Reading

#### **Above 1GHz**

Frequency (MHz)	Reading (dBuV)	Correction Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
XXXX.XXXX	62.09	-11.42	50.67	74.00	-23.33	Peak
XXXX.XXXX	49.78	-11.42	38.36	54.00	-15.64	AVG

Frequency (MHz) = Emission frequency in MHz

Reading (dBuV) = Uncorrected Analyzer / Receiver reading Correction Factor (dB/m) = Antenna factor + Cable loss – Amplifier gain Result (dBuV/m) = Reading (dBuV) + Correction Factor (dB/m)

Limit (dBuV/m) = Limit stated in standard

Margin (dB) = Result (dBuV/m) – Limit (dBuV/m)

Peak = Peak Reading AVG = Average Reading

#### **Calculation Formula**

Margin (dB) = Result (dBuV/m) – Limits (dBuV/m)

Result (dBuV/m) = Reading (dBuV) + Correction Factor (dB/m)



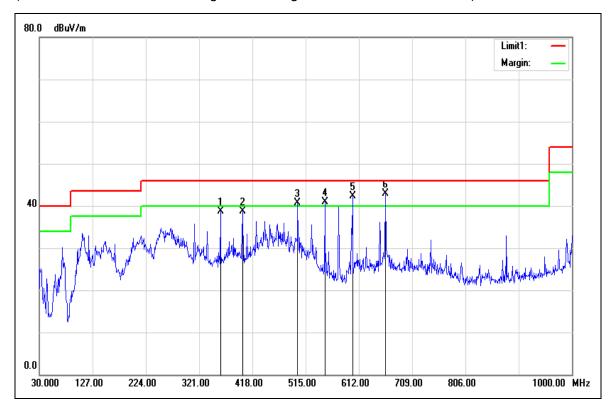
## Report No: C161121Z01-F

## 7.6. TEST RESULTS

#### **Below 1GHz**

Model No.	HP5990A	Test Mode	Mode 1
Environmental Conditions	24°C, 52% RH	RBW,VBW	120 kHz
Antenna Pole	Vertical	Antenna Distance	3m
<b>Detector Function</b>	Quasi-peak	Tested By	Saber Huang
Tested Date	2016/12/12		

(The chart below shows the highest readings taken from the final data.)



Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
359.8000	47.89	-9.19	38.70	46.00	-7.30	QP
400.5400	47.25	-8.59	38.66	46.00	-7.34	QP
500.4500	47.52	-6.88	40.64	46.00	-5.36	QP
549.9200	47.35	-6.40	40.95	46.00	-5.05	QP
600.3600	48.13	-5.84	42.29	46.00	-3.71	QP
660.5000	47.93	-4.98	42.95	46.00	-3.05	QP

**REMARKS:** 1. QP= Quasi-peak Reading

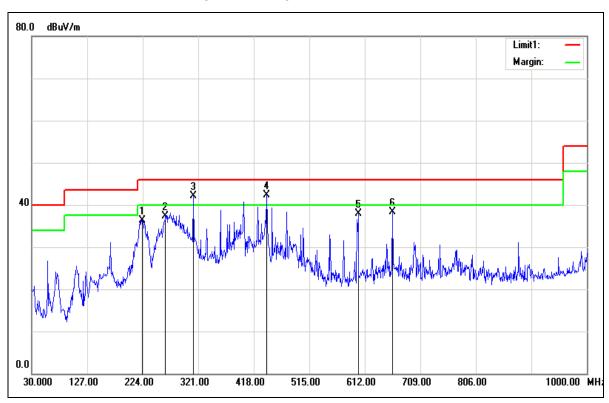
2. The other emission levels were very low against the limit.

Mode 1

Report No: C161121Z01-F

Model No.	HP5990A	Test Mode	Mode 1
Environmental Conditions	24°C, 52% RH	RBW,VBW	120 kHz
Antenna Pole	Horizontal	Antenna Distance	3m
Detector Function	Quasi-peak	Tested By	Saber Huang
Tested Date	2016/12/12		

(The chart below shows the highest readings taken from the final data.)



Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
223.0300	47.18	-10.80	36.38	46.00	-9.62	QP
263.7700	47.91	-10.51	37.40	46.00	-8.60	QP
312.2700	52.06	-9.93	42.13	46.00	-3.87	QP
440.3100	51.70	-9.45	42.25	46.00	-3.75	QP
600.3600	43.76	-5.84	37.92	46.00	-8.08	QP
660.5000	43.28	-4.98	38.30	46.00	-7.70	QP

REMARKS: 1. QP= Quasi-peak Reading

2. The other emission levels were very low against the limit.

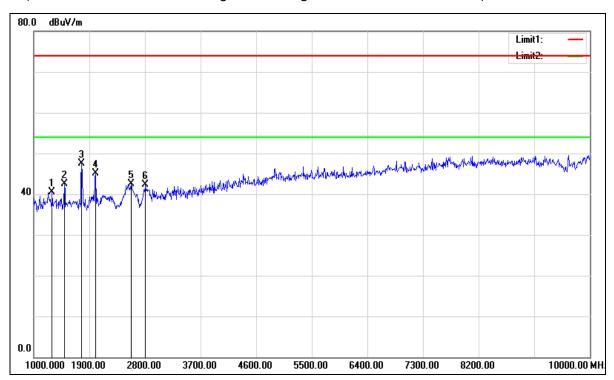


Report No: C161121Z01-F

#### **Above 1GHz**

Model No.	HP5990A	Test Mode	Mode 1
Environmental Conditions	24°C, 52% RH	RBW,VBW	1MHz
Antenna Pole	Vertical	Antenna Distance	3m
Detector Function:	Peak/AVG	Tested By	Saber Huang
Tested Date	2016/12/12		

(The chart below shows the highest readings taken from the final data.)



Frequency (MHz)	Reading (dBuV)	Correction Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1297.000	48.00	-7.44	40.56	74.00	-33.44	peak
1495.000	49.32	-6.89	42.43	74.00	-31.57	peak
1774.000	53.87	-6.33	47.54	74.00	-26.46	peak
1999.000	50.21	-5.01	45.20	74.00	-28.80	peak
2575.000	44.71	-2.12	42.59	74.00	-31.41	peak
2809.000	43.92	-1.70	42.22	74.00	-31.78	peak

#### REMARKS:

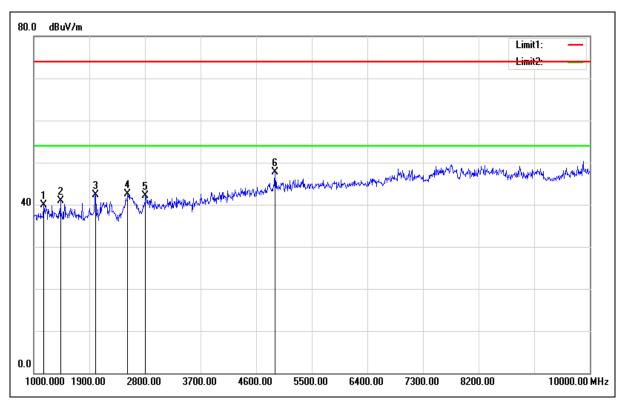
- 1. The other emission levels were very low against the limit.
- 2. "--", means the average measurement was not performed when the measured peak data under the limit of average detection.
- 3. Peak= Peak Reading; AVG= Average Reading.



Report No: C161121Z01-F

Model No.	HP5990A	Test Mode	Mode 1
Environmental Conditions	24°C, 52% RH	RBW,VBW	1MHz
Antenna Pole	Horizontal	Antenna Distance	3m
Detector Function:	Peak/AVG	Tested By	Saber Huang
Tested Date	2016/12/12		

(The chart below shows the highest readings taken from the final data.)



Frequency (MHz)	Reading (dBuV)	Correction Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1162.000	47.85	-7.94	39.91	74.00	-34.09	Peak
1432.000	47.84	-7.00	40.84	74.00	-33.16	Peak
1999.000	47.41	-5.01	42.40	74.00	-31.60	Peak
2521.000	44.77	-2.22	42.55	74.00	-31.45	Peak
2809.000	43.74	-1.70	42.04	74.00	-31.96	Peak
4906.000	43.12	4.67	47.79	74.00	-26.21	Peak

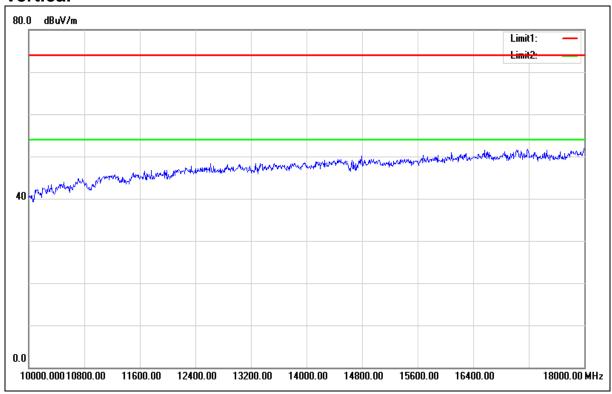
#### REMARKS:

- 1. The other emission levels were very low against the limit.
- 2. "--", means the average measurement was not performed when the measured peak data under the limit of average detection.
- 3. Peak= Peak Reading; AVG= Average Reading.



Report No: C161121Z01-F

## **Vertical**



## **Horizontal**

