

Produkte
Products

Prüfbericht - Nr.: 17030908 001		Seite 1 von 40 Page 1 of 40	
Test Report No.:			
Auftraggeber: Client:	Uni-Art Precise Products Ltd. 11-12/F, Yue Xiu Industrial Building 87, Hung To Road, Kwun Tong, Kowloon, Hong Kong		
Gegenstand der Prüfung: Test item:	FM CORDLESS HEADPHONES		
Bezeichnung: Identification:	HP3190A HA-W600RF No. J22320-001	Serien-Nr.: Serial No.:	n.a.
Wareneingangs-Nr.: Receipt No.:	164002504	Eingangsdatum: Date of receipt:	01.02.2013
Zustand des Prüfgegenstandes bei Anlieferung: Condition of test item at delivery:		Test samples received are sufficient for testing and not damaged.	
Prüfört: Testing location:	Accurate Technology Co., Ltd. F1, Bldg. A, Changyuan New Material Port, Keyuan Rd., Science & Industry Park, Nanshan, Shenzhen, P.R. China		
Prüfgrundlage: Test specification:	FCC CFR47 Part 15: Subpart C Section 15.249 FCC CFR47 Part 15: Subpart C Section 15.207 FCC CFR47 Part 15: Subpart C Section 15.209 FCC KDB Publication 447498 v05 RSS-210 Issue 8 December 2010 RSS-Gen Issue 3 December 2010 RSS-102 Issue 4 March 2010		
Prüfergebnis: Test Result:	Der Prüfgegenstand entspricht oben genannter Prüfgrundlage(n). The test item passed the test specification(s).		
Prüflaboratorium: Testing Laboratory:	TÜV Rheinland (Shenzhen) Co., Ltd.		
geprüft/ tested by:		kontrolliert/ reviewed by:	
 25.03.2013 Owen Tian/Project Manager		 25.03.2013 Sam Lin/Technical Certifier	
Datum Date	Name/Stellung Name/Position	Unterschrift Signature	
Sonstiges/ Other Aspects:			
Abkürzungen: P(ass) = entspricht Prüfgrundlage F(ail) = entspricht nicht Prüfgrundlage N/A = nicht anwendbar N/T = nicht getestet		Abbreviations: P(ass) = passed F(ail) = failed N/A = not applicable N/T = not tested	
Dieser Prüfbericht bezieht sich nur auf das o.g. Prüfmuster und darf ohne Genehmigung der Prüfstelle nicht auszugsweise vervielfältigt werden. Dieser Bericht berechtigt nicht zur Verwendung eines Prüfzeichens. <i>This test report 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 safety mark on this or similar products.</i>			

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TEST SUMMARY

5.1.1 20dB BANDWIDTH AND 99% BANDWIDTH

RESULT: Pass

5.1.2 FUNDAMENTAL & HARMONICS RADIATED EMISSION

RESULT: Pass

5.1.3 RADIATED EMISSIONS

RESULT: Pass

5.1.4 CONDUCTED EMISSION

RESULT: Pass

6.1.1 ELECTROMAGNETIC FIELDS

RESULT: Pass

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1. General Remarks

1.1 Complementary Materials

None.

2. Test Sites

2.1 Test Facilities

Accurate Technology Co., Ltd.

(FCC Registration No.: 752051)

(Test site Industry Canada No.: 5077A-2)

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

The tests at the test site 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

Kind of Equipment	Manufacturer	Type	S/N	Calibrated until
Transmitter spurious emissions & Receiver spurious emissions				
Spectrum Analyzer	Agilent	E7405A	MY45115511	2014-01-07
Test Receiver	Rohde & Schwarz	ESCS30	100307	2014-01-07
Bilog Antenna	Schwarzbeck	VULB9163	9163-323	2014-01-07
Loop Antenna	Schwarzbeck	FMZB1516	1516131	2014-01-07
Horn Antenna	Schwarzbeck	BBHA9120D	9120D-655	2014-01-07
Horn Antenna	Schwarzbeck	BBHA9170	9170-359	2014-01-07
50 Coaxial Switch	Anritsu Corp	MP59B	6200506474	2014-01-07
RF Coaxial Cable	SUHNER	N-3m	No.8	2014-01-07
RF Coaxial Cable	RESENBERGER	N-3.5m	No.9	2014-01-07
RF Coaxial Cable	SUHNER	N-6m	No.10	2014-01-07
RF Coaxial Cable	RESENBERGER	N-12m	No.11	2014-01-07
RF Coaxial Cable	RESENBERGER	N-0.5m	No.12	2014-01-07
Pre-Amplifier	Rohde & Schwarz	CBLU118354 0-01	3791	2014-01-07
Radio Spectrum Test				
Spectrum Analyzer	Rohde & Schwarz	ESPI3	100396/003	2014-01-07
Temp. & Humid. Chamber	Gongwen	HSD-500	0109	2014-01-07
Conducted Emission				
Test Receiver	Rohde & Schwarz	ESCS30	100307	2014-01-07
L.I.S.N.	Schwarzbeck	NLSK8126	8126431	2014-01-07
L.I.S.N.	Rohde & Schwarz	ESH3-Z5	100310	2014-01-07
Pulse Limiter	Rohde & Schwarz	ESH3-Z2	100815	2014-01-07
50Ω Coaxial Switch	Anritsu Corp	MP59B	6200283933	2014-01-07
RF Coaxial Cable	SUHNER	N-2m	No.3	2014-01-07
Radiated Emission				
Spectrum Analyzer	Agilent	E7405A	MY45115511	2014-01-07
Test Receiver	Rohde & Schwarz	ESCS30	100307	2014-01-07
Bilog Antenna	Schwarzbeck	VULB9163	9163-323	2014-01-07
Loop Antenna	Schwarzbeck	FMZB1516	1516131	2014-01-07
Horn Antenna	Schwarzbeck	BBHA9120D	9120D-655	2014-01-07
Horn Antenna	Schwarzbeck	BBHA9170	9170-359	2014-01-07
50 Coaxial Switch	Anritsu Corp	MP59B	6200506474	2014-01-07
RF Coaxial Cable	SUHNER	N-3m	No.8	2014-01-07
RF Coaxial Cable	RESENBERGER	N-3.5m	No.9	2014-01-07
RF Coaxial Cable	SUHNER	N-6m	No.10	2014-01-07
RF Coaxial Cable	RESENBERGER	N-12m	No.11	2014-01-07
RF Coaxial Cable	RESENBERGER	N-0.5m	No.12	2014-01-07
Pre-Amplifier	Rohde & Schwarz	CBLU118354 0-01	3791	2014-01-07

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

Table 2: Measurement Uncertainty

Parameter	Uncertainty
Radio Spectrum	$< \pm 0.60 \text{ dB}$
Radiated emission of transmitter, valid up to 12.75 GHz	$< \pm 4.42 \text{ dB}$
Radiated emission of receiver, valid up to 12.75 GHz	$< \pm 4.42 \text{ dB}$
Conducted Emission	$< \pm 2.23 \text{ dB}$
Radiated Emission	$< \pm 4.42 \text{ dB}$

2.6 Location of Original Data

The original copies of all test data taken during actual testing were 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, Shenzhen, 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 transmitter for wireless headphone used for audio entertainment in house or similar environment.

Two models are identical except the model name.

For details refer to the User Manual and Circuit Diagram.

3.2 Ratings and System Details

Table 3: Technical Specification of EUT

Technical Specification	Value
Kind of Equipment	FM CORDLESS HEADHPONES
Type Designation	HP3190A
FCC ID	MVAHP3190A-001T
IC ID	2579A-HP3190A
Operating Frequency Band	902 – 928MHz
Operating Frequency	912.0MHz, 912.5MHz, 913.0MHz
Channel Number	3
Channel Separation	500kHz
Extreme Temperature Range	-20~+45°C
Operation Voltage	DC 8V (via the exclusive AC adaptor)
Modulation	FM
Antenna Type	Integral
Antenna Gain	0dBi

3.3 Independent Operation Modes

The basic operation modes are:

- A. On, transmitting
- B. Standby
- C. Off

3.4 Noise Generating and Noise Suppressing Parts

Refer to the Circuit Diagram.

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3.5 Submitted Documents

- Bill of Material
- PCB Layout
- Photo Document
- Circuit Diagram
- Instruction Manual
- Rating Label

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 C63.4: 2003. According to clause 3.1, all tests were applied on model HP3190A only.

4.3 Special Accessories and Auxiliary Equipment

The EUT was tested together with the following accessories:

Description	Manufacturer	Part No.	S/N
iPod	Apple	A1238	8K039T1Y9ZU

The EUT was tested with following cables:

Interface(s)/Port(s):	Max. cable length, shielding	Cable classification
AC Mains of Adapter	2 cores, non-shielded port, 3m	AC Power Input
DC power input of EUT	2 cores, non-shielded port, 3m	DC Power Input
Line input	2 cores, non-shielded port, 3m	Audio Input

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

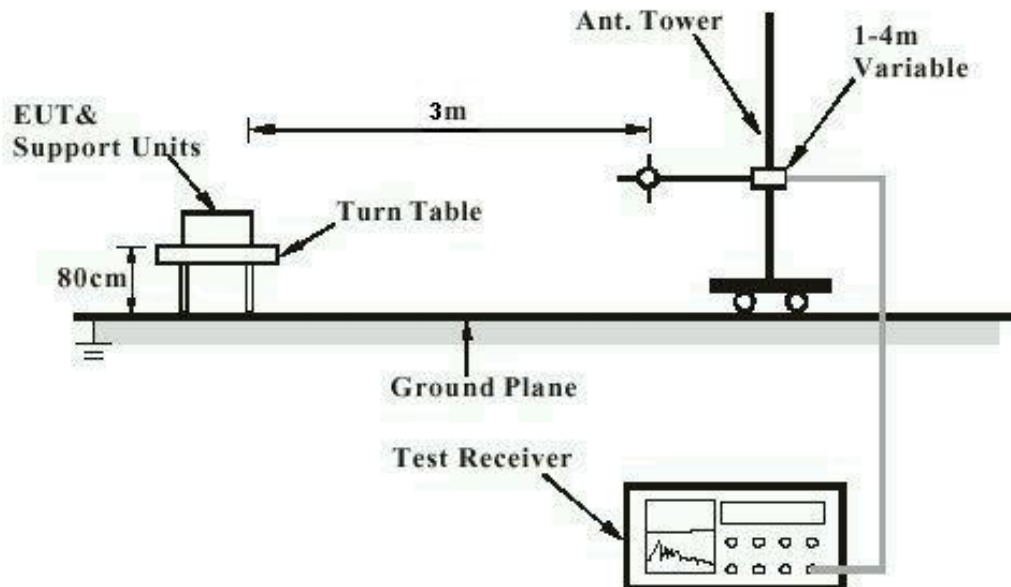


Diagram of Measurement Equipment Configuration for Conduction Measurement

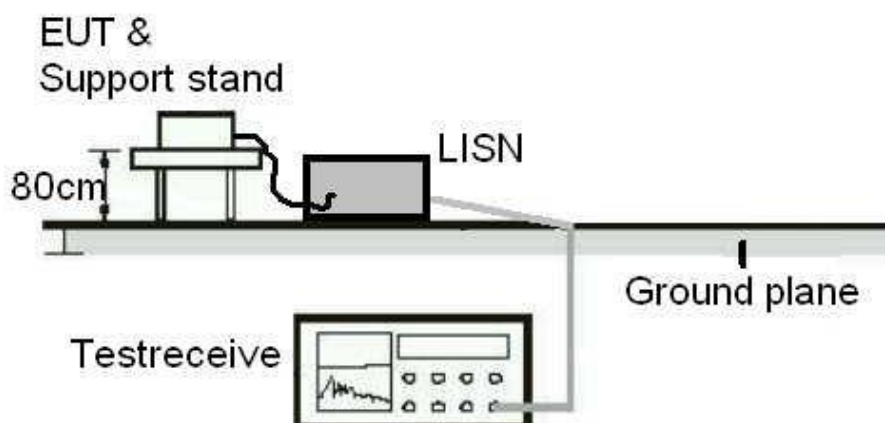
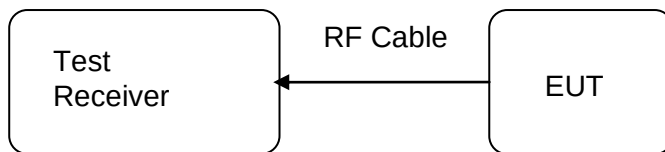


Diagram of Measurement Equipment Configuration for Transmitter Measurement

5. Test Results

5.1 Transmitter Requirement & Test Suites

5.1.1 20dB Bandwidth and 99% Bandwidth

RESULT:**Pass**

Date of testing : 2013-02-21
Test standard : Clause 4.6.1 & 4.6.3 of RSS-210
Basic standard : ANSI C63.4: 2003
Kind of test site : Shielded room

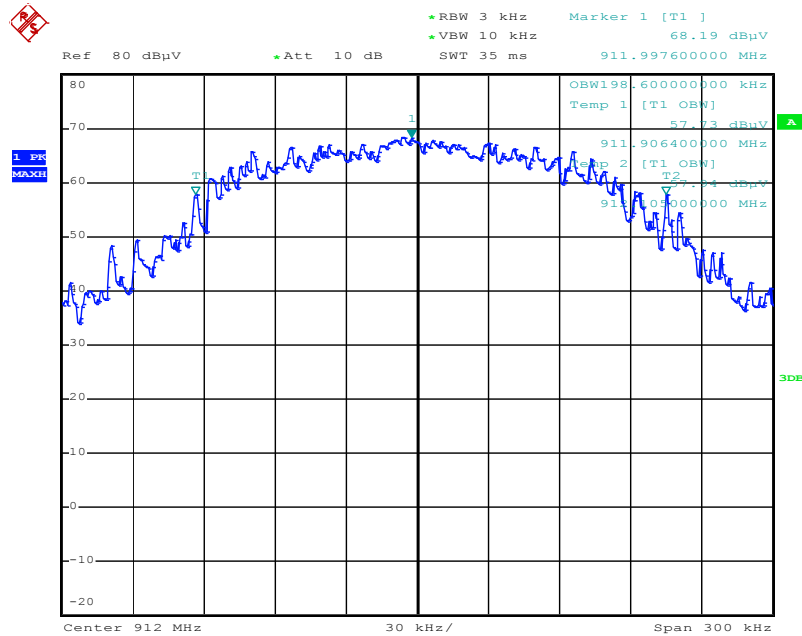
Test setup

Test Channel : Low/ Middle/ High
Operation Mode : A
Ambient temperature : 25°C
Relative humidity : 52%
Atmospheric pressure : 101kPa

Table 4: Test result of 20dB & 99% Bandwidth

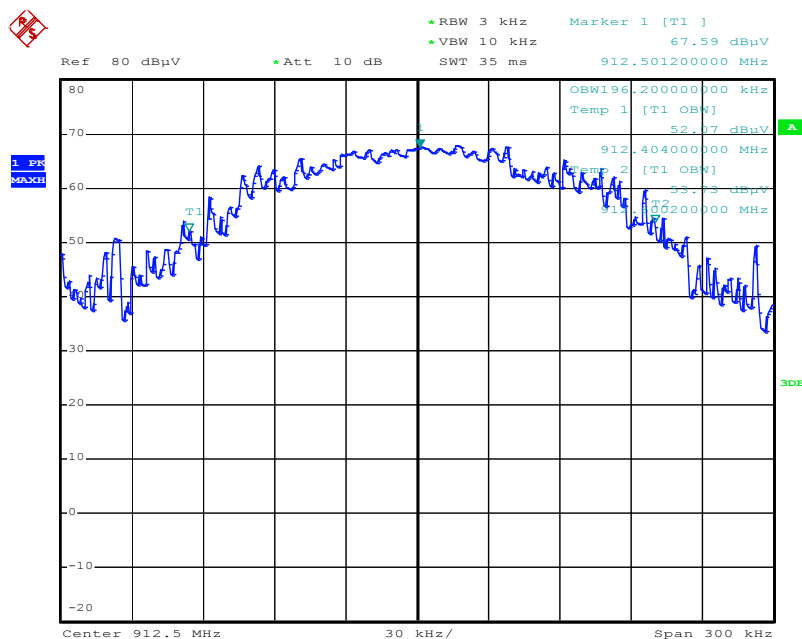
Channel	Channel Frequency (MHz)	20dB Bandwidth (MHz)	99% Bandwidth (MHz)
Low Channel	912	0.199	0.234
Mid Channel	912.5	0.196	0.223
High Channel	913	0.197	0.223

Test Plot of 20dB Bandwidth Low Channel



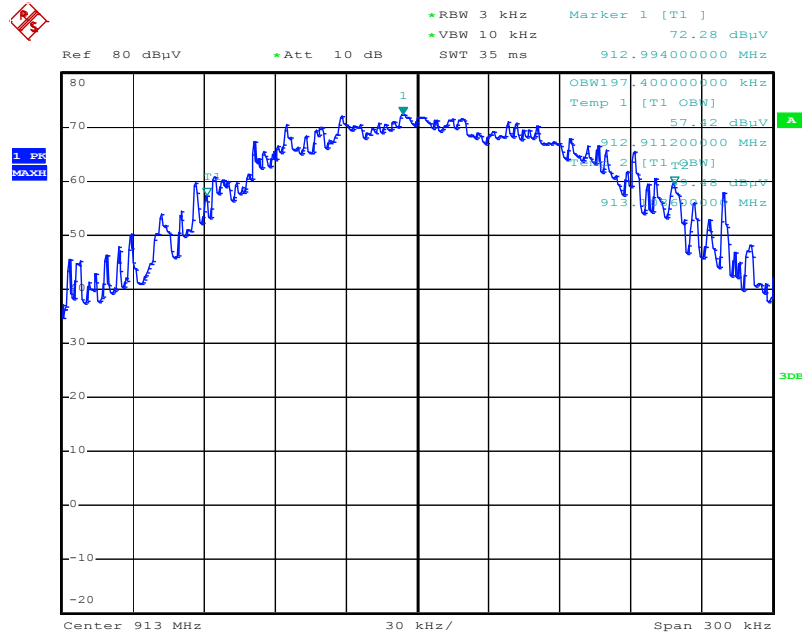
Date: 21.FEB.2013 09:56:20

Middle Channel



Date: 21.FEB.2013 09:54:16

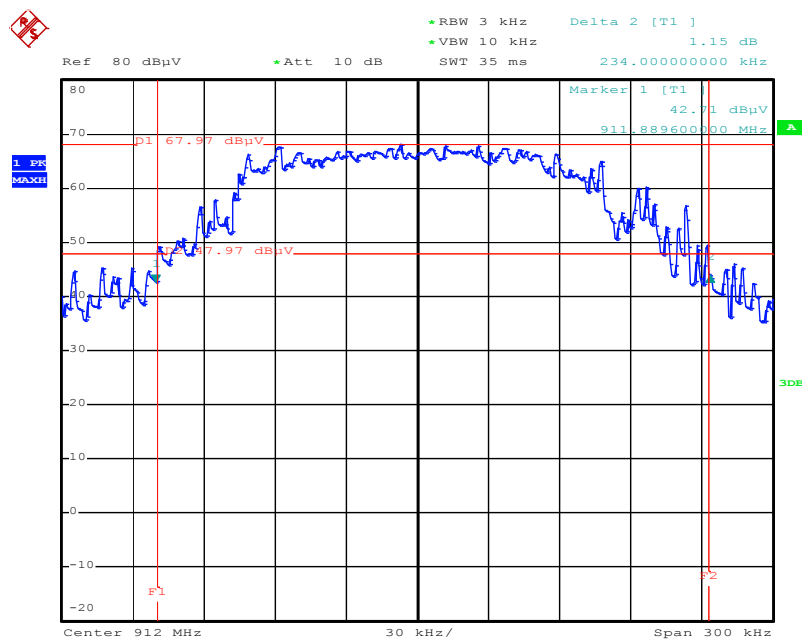
High Channel



Date: 21.FEB.2013 10:01:03

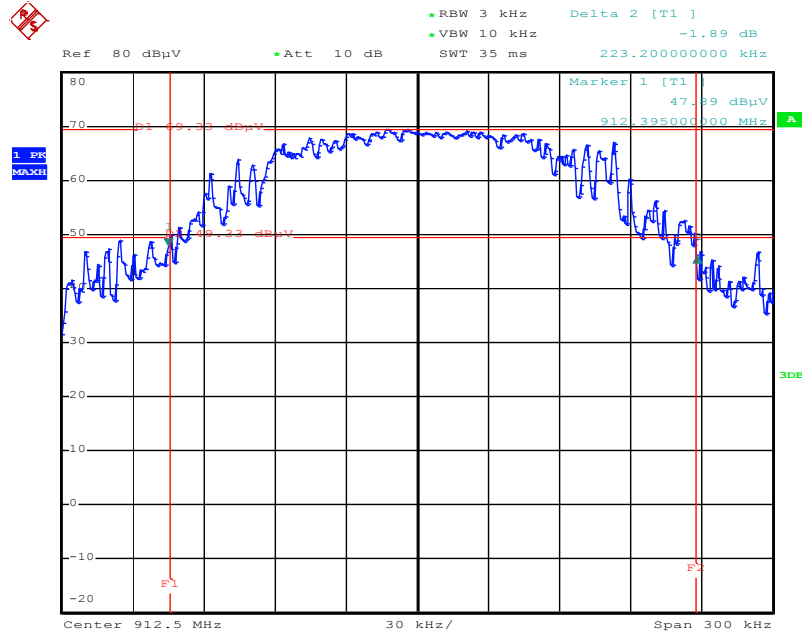
Test Plot of 99% Bandwidth

Low Channel



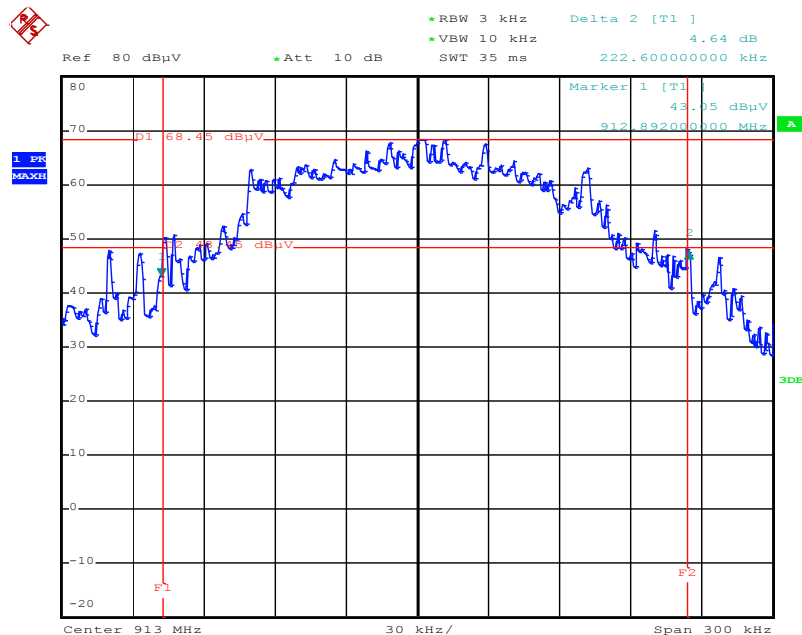
Date: 21.FEB.2013 13:34:28

Middle Channel



Date: 21.FEB.2013 13:45:19

High Channel



Date: 21.FEB.2013 13:56:48

5.1.2 Fundamental & Harmonics Radiated Emission

RESULT:
Pass

Date of testing : 2013-02-20
 Test standard : FCC part 15.249(a)
 RSS-210 Clause 2.2
 Basic standard : ANSI C63.4: 2003
 Limits : FCC part 15.249(a)
 A 2.9(a) of RSS-210
 Kind of test site : 3m Semi-Anechoic Chamber

Test setup

Test Channel : Low/ Middle/ High
 Operation mode : A
 Ambient temperature : 25°C
 Relative humidity : 52%
 Atmospheric pressure : 101kPa

**Table 5: Polarization of the measurement for the larger power level
channel 2 (912.5MHz): Horizontal**

Test conditions		Fundamental Frequency		2 nd Harmonic Frequency	
		Channel 2 (912.5MHz)		Channel 1 (1824MHz)	
T _{nom} (25°C)	Unit	(dBµV/m)	(mV/m)	(dBµV/m)	(µV/m)
	Horizontal	83.44	15	40.24	126
	Vertical	82.02	13	42.17	128
Limit		94	50	54	500

The final measurement for frequencies below 1000MHz is performed with Quasi Peak detector; the final measurement for frequencies above 1000MHz is performed with Average detector.

Disturbance other than those mentioned are small or not detectable.

For details refer to following test plot.

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Test Plot of Radiated emissions


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 Site: 2# Chamber
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 Fax:+86-0755-26503396

Job No.: Bob #4990

Polarization: Horizontal

Standard: FCC Class B 3M Radiated

Power Source: AC 120V/60Hz

Test item: Radiation Test

Date: 13/02/20/

Temp.(C)/Hum.(%) 26 C / 55 %

Time: 17/31/49

EUT: TX of Wireless Headphone

Engineer Signature: Bob

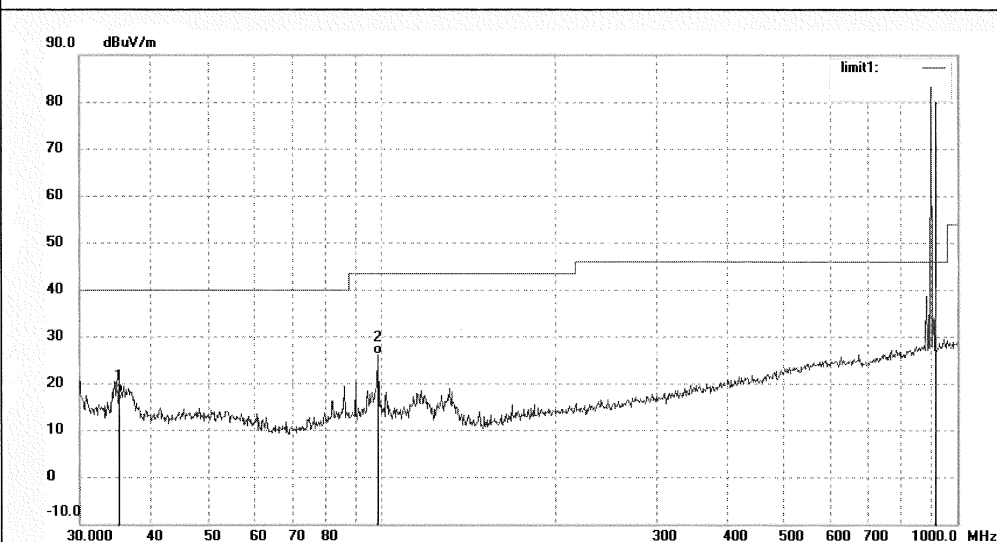
Mode: TX912MHz

Distance: 3m

Model: HP3190A

Manufacturer: Unit-Art

Note:



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	35.0157	30.25	-12.42	17.83	40.00	-22.17	QP			
2	98.8210	39.46	-13.28	26.18	43.50	-17.32	QP			
3	912.0000	82.85	0.39	83.24	46.00	37.24	QP			


ACCURATE TECHNOLOGY CO., LTD.

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Tel:+86-0755-26503290

Fax:+86-0755-26503396

Job No.: Bob #4991

Polarization: Vertical

Standard: FCC Class B 3M Radiated

Power Source: AC 120V/60Hz

Test item: Radiation Test

Date: 13/02/20/

Temp.(C)/Hum.(%) 26 C / 55 %

Time: 17/38/47

EUT: TX of Wireless Headphone

Engineer Signature: Bob

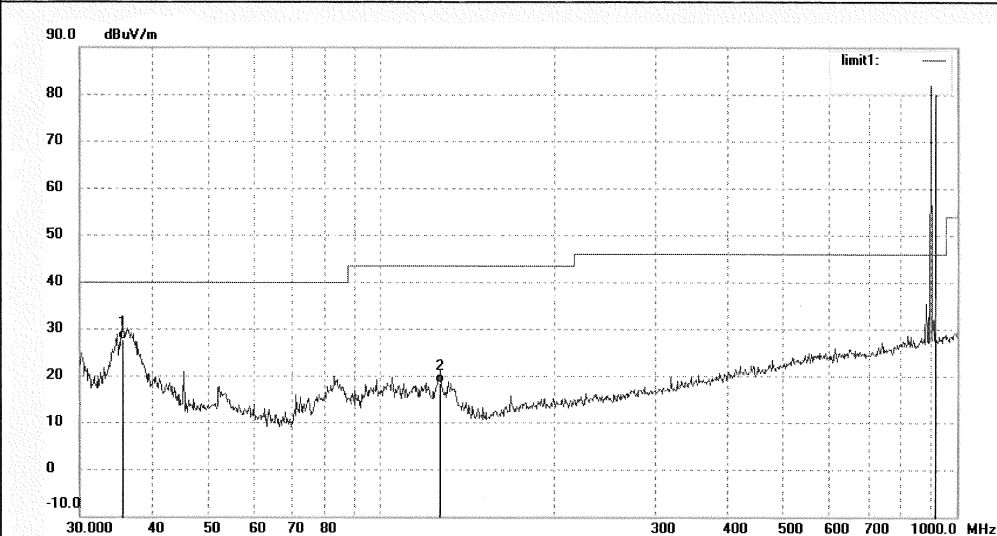
Mode: TX912MHz

Distance: 3m

Model: HP3190A

Manufacturer: Unit-Art

Note:



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	35.6362	40.17	-12.57	27.60	40.00	-12.40	QP			
2	127.1390	33.13	-14.79	18.34	43.50	-25.16	QP			
3	912.0000	81.50	0.39	81.89	46.00	35.89	QP			


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Job No.: Bob #5000

Polarization: Horizontal

Standard: FCC Class B 3M Radiated

Power Source: AC 120V/60Hz

Test item: Radiation Test

Date: 13/02/20/

Temp.(C)/Hum.(%) 26 C / 55 %

Time: 18/46/21

EUT: TX of Wireless Headphone

Engineer Signature: Bob

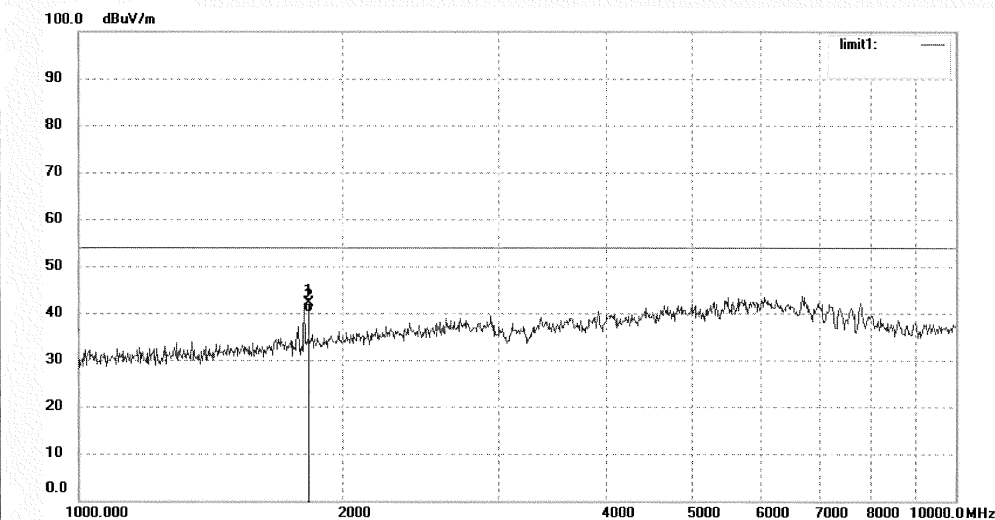
Mode: TX912MHz

Distance: 3m

Model: HP3190A

Manufacturer: Unit-Art

Note:



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	1824.081	51.89	-9.79	42.10	54.00	-11.90	peak			
2	1824.081	50.03	-9.79	40.24	54.00	-13.76	AVG			


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Fax:+86-0755-26503396

Job No.: Bob #5001

Standard: FCC Class B 3M Radiated

Test item: Radiation Test

Temp.(C)/Hum.(%) 26 C / 55 %

EUT: TX of Wireless Headphone

Mode: TX912MHz

Model: HP3190A

Manufacturer: Unit-Art

Polarization: Vertical

Power Source: AC 120V/60Hz

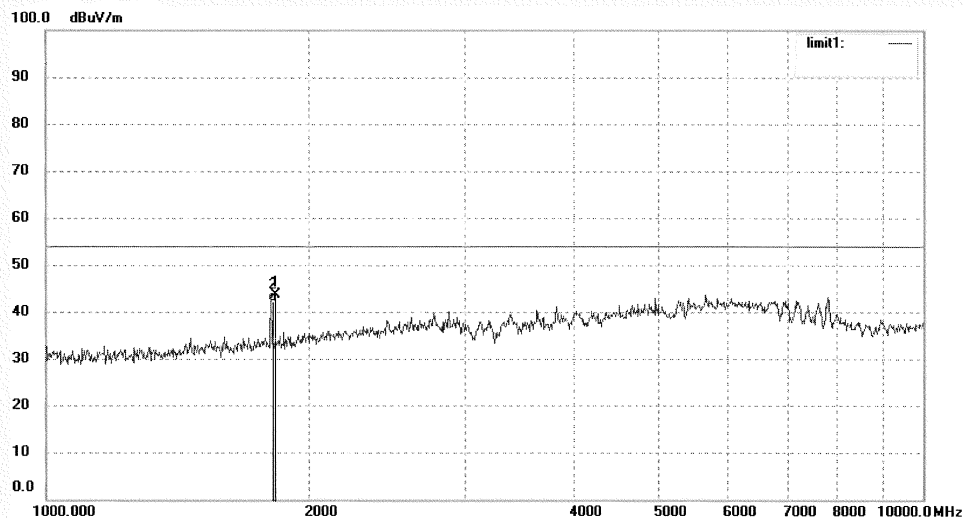
Date: 13/02/20/

Time: 18/55/26

Engineer Signature: Bob

Distance: 3m

Note:



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	1824.080	53.46	-9.79	43.67	54.00	-10.33	peak			
2	1824.080	51.96	-9.79	42.17	54.00	-11.83	AVG			


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Job No.: Bob #4993

Polarization: Horizontal

Standard: FCC Class B 3M Radiated

Power Source: AC 120V/60Hz

Test item: Radiation Test

Date: 13/02/20/

Temp.(C)/Hum.(%) 26 C / 55 %

Time: 17/52/40

EUT: TX of Wireless Headphone

Engineer Signature: Bob

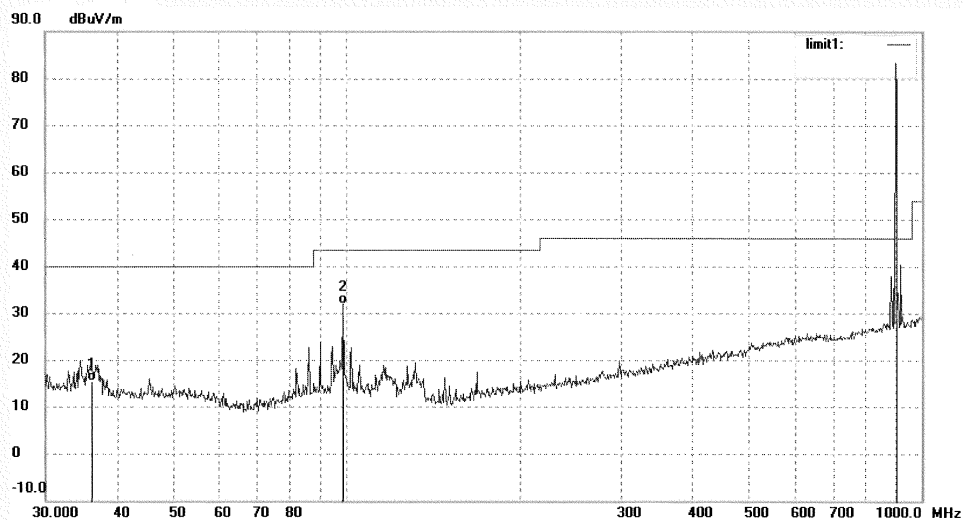
Mode: TX912.5MHz

Distance: 3m

Model: HP3190A

Manufacturer: Unit-Art

Note:



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	36.0139	28.12	-12.65	15.47	40.00	-24.53	QP			
2	98.8752	45.18	-13.27	31.91	43.50	-11.59	QP			
3	912.5000	83.04	0.40	83.44	46.00	37.44	QP			


ACCURATE TECHNOLOGY CO., LTD.

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Fax:+86-0755-26503396

Job No.: Bob #4992

Polarization: Vertical

Standard: FCC Class B 3M Radiated

Power Source: AC 120V/60Hz

Test item: Radiation Test

Date: 13/02/20/

Temp.(C)/Hum.(%) 26 C / 55 %

Time: 17/45/31

EUT: TX of Wireless Headphone

Engineer Signature: Bob

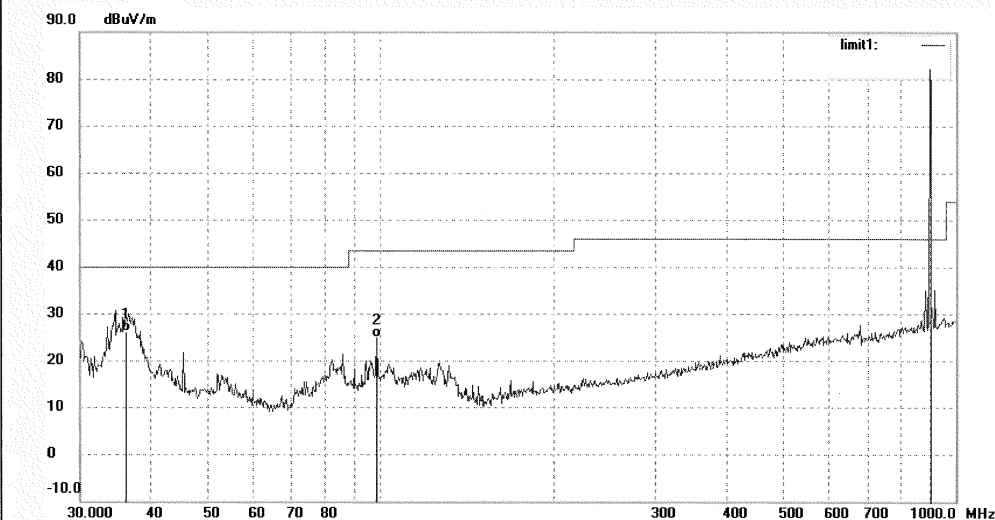
Mode: TX912.5MHz

Distance: 3m

Model: HP3190A

Manufacturer: Unit-Art

Note:



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	36.0139	38.73	-12.65	26.08	40.00	-13.92	QP			
2	98.8321	38.04	-13.27	24.77	43.50	-18.73	QP			
3	912.5000	81.62	0.40	82.02	46.00	36.02	QP			


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Site: 2# Chamber

Tel:+86-0755-26503290

Fax:+86-0755-26503396

Job No.: Bob #4999

Polarization: Horizontal

Standard: FCC Class B 3M Radiated

Power Source: AC 120V/60Hz

Test item: Radiation Test

Date: 13/02/20/

Temp.(C)/Hum.(%) 26 C / 55 %

Time: 18/39/34

EUT: TX of Wireless Headphone

Engineer Signature: Bob

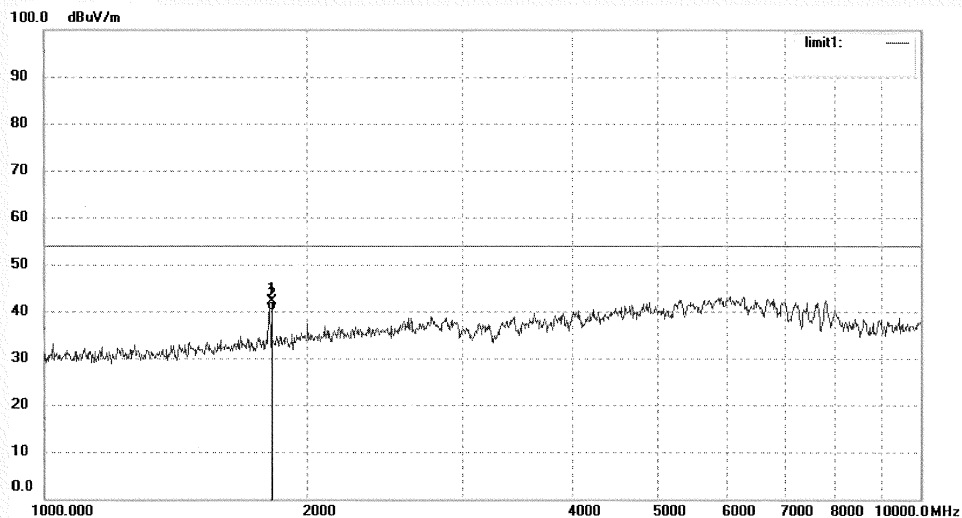
Mode: TX912.5MHz

Distance: 3m

Model: HP3190A

Manufacturer: Unit-Art

Note:



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	1825.106	51.85	-9.78	42.07	54.00	-11.93	peak			
2	1825.106	49.89	-9.78	40.11	54.00	-13.89	AVG			

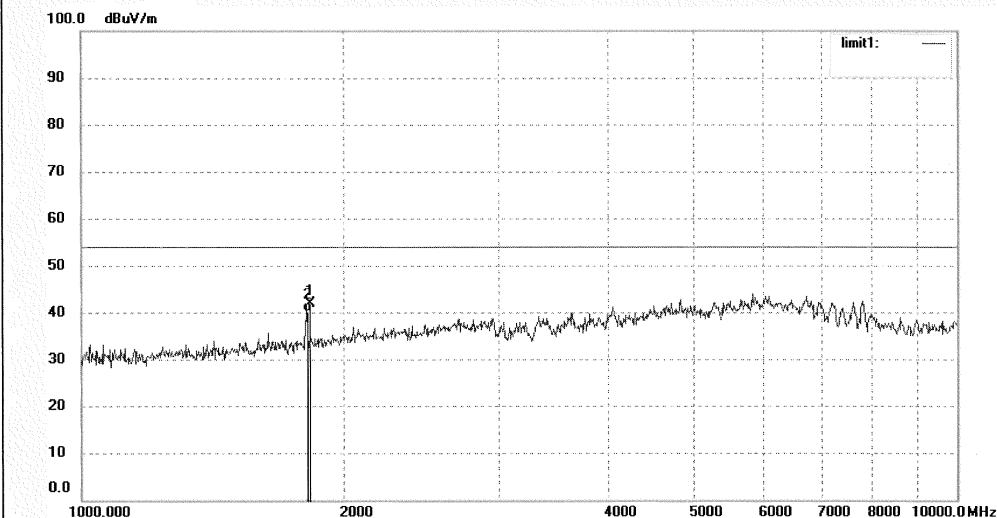

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Science & Industry Park,Nanshan Shenzhen,P.R.China

Site: 2# Chamber
Tel: +86-0755-26503290
Fax: +86-0755-26503396

Job No.: Bob #4998	Polarization: Vertical
Standard: FCC Class B 3M Radiated	Power Source: AC 120V/60Hz
Test item: Radiation Test	Date: 13/02/20/
Temp.(C)/Hum.(%) 26 C / 55 %	Time: 18/31/14
EUT: TX of Wireless Headphone	Engineer Signature: Bob
Mode: TX912.5MHz	Distance: 3m
Model: HP3190A	
Manufacturer: Unit-Art	

Note:



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	1825.107	51.74	-9.78	41.96	54.00	-12.04	peak			
2	1825.107	50.02	-9.78	40.24	54.00	-13.76	AVG			


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Site: 2# Chamber

Tel:+86-0755-26503290

Fax:+86-0755-26503396

Job No.: Bob #4994

Polarization: Horizontal

Standard: FCC Class B 3M Radiated

Power Source: AC 120V/60Hz

Test item: Radiation Test

Date: 13/02/20/

Temp.(C)/Hum.(%) 26 C / 55 %

Time: 17/59/55

EUT: TX of Wireless Headphone

Engineer Signature: Bob

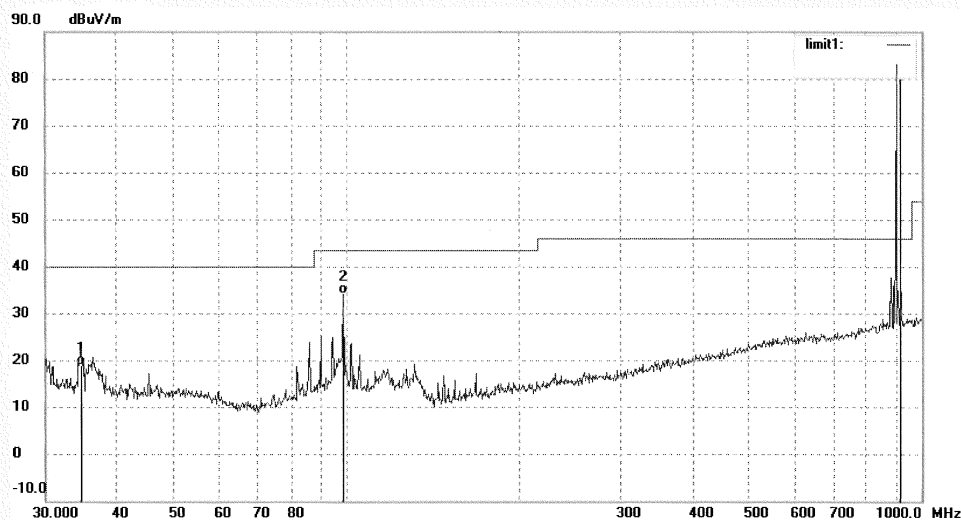
Mode: TX913MHz

Distance: 3m

Model: HP3190A

Manufacturer: Unit-Art

Note:



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	34.5270	31.24	-12.38	18.86	40.00	-21.14	QP			
2	98.3752	47.54	-13.35	34.19	43.50	-9.31	QP			
3	913.0000	82.70	0.41	83.11	46.00	37.11	QP			


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Fax:+86-0755-26503396

Job No.: Bob #4995

Standard: FCC Class B 3M Radiated

Test item: Radiation Test

Temp.(C)/Hum.(%) 26 C / 55 %

EUT: TX of Wireless Headphone

Mode: TX913MHz

Model: HP3190A

Manufacturer: Unit-Art

Polarization: Vertical

Power Source: AC 120V/60Hz

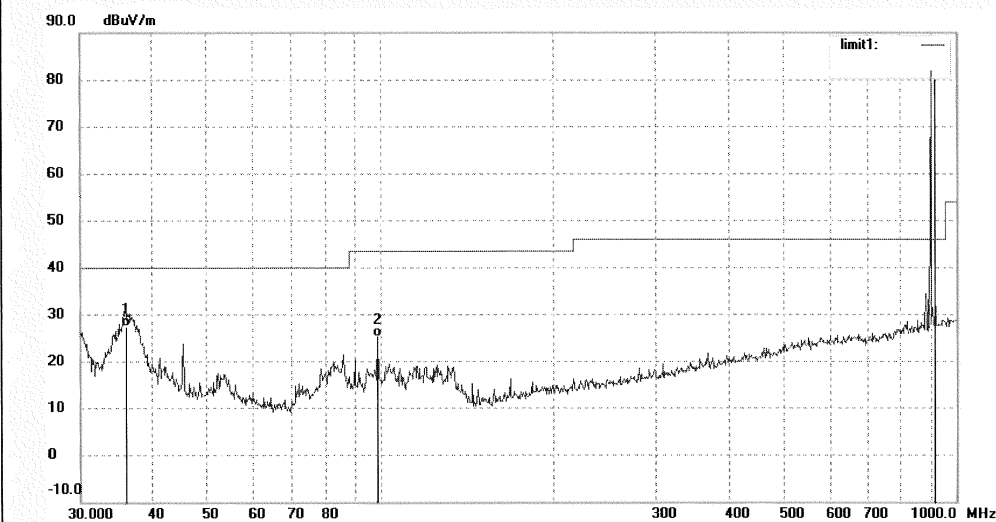
Date: 13/02/20/

Time: 18/08/37

Engineer Signature: Bob

Distance: 3m

Note:



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	36.0139	40.03	-12.65	27.38	40.00	-12.62	QP			
2	98.3752	38.49	-13.35	25.14	43.50	-18.36	QP			
3	913.0000	81.54	0.41	81.95	46.00	35.95	QP			

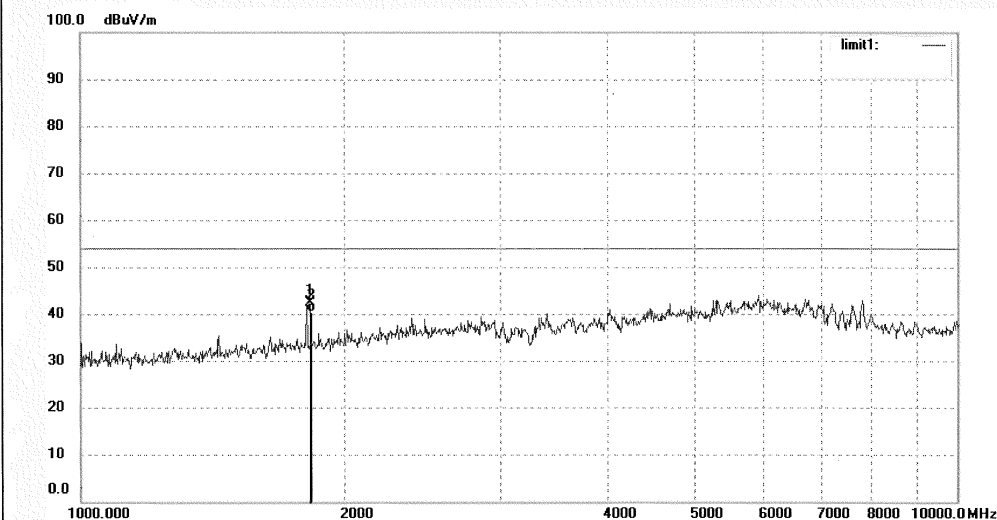

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Site: 2# Chamber
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Fax: +86-0755-26503396

Job No.: Bob #4996	Polarization: Horizontal
Standard: FCC Class B 3M Radiated	Power Source: AC 120V/60Hz
Test item: Radiation Test	Date: 13/02/20/
Temp.(C)/Hum.(%) 26 C / 55 %	Time: 18/15/26
EUT: TX of Wireless Headphone	Engineer Signature: Bob
Mode: TX913MHz	Distance: 3m
Model: HP3190A	
Manufacturer: Unit-Art	

Note:



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	1826.015	52.16	-9.78	42.38	54.00	-11.62	peak			
2	1826.015	50.08	-9.78	40.30	54.00	-13.70	AVG			


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Site: 2# Chamber

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Fax: +86-0755-26503396

Job No.: Bob #4997

Polarization: Vertical

Standard: FCC Class B 3M Radiated

Power Source: AC 120V/60Hz

Test item: Radiation Test

Date: 13/02/20/

Temp.(C)/Hum.(%) 26 C / 55 %

Time: 18/23/19

EUT: TX of Wireless Headphone

Engineer Signature: Bob

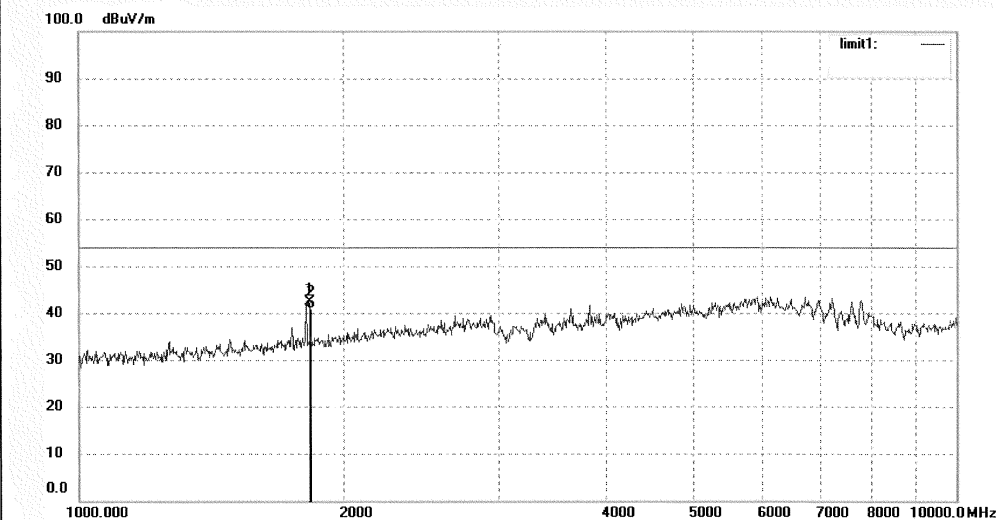
Mode: TX913MHz

Distance: 3m

Model: HP3190A

Manufacturer: Unit-Art

Note:



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	1826.015	52.18	-9.78	42.40	54.00	-11.60	peak			
2	1826.015	50.67	-9.78	40.89	54.00	-13.11	AVG			

5.1.3 Radiated emissions**RESULT:****Pass**

Date of testing	:	2013-02-20
Test standard	:	FCC Part 15.209(a) FCC Part 15.249(d) RSS-210 Clause 2.2
Basic standard	:	ANSI C63.4: 2003
Frequency range	:	30 – 10000MHz *
Limits	:	FCC Part 15.209(a) FCC Part 15.249(d) A 2.9(b) of RSS-210
Kind of test site	:	3m Semi-Anechoic Chamber

Test Setup

Input Voltage	:	AC 120V, 60Hz
Operation Mode	:	A
Earthing	:	Not Connected
Ambient temperature	:	25°C
Relative humidity	:	52%
Atmospheric pressure	:	101kPa

*- The EUT's highest frequency generated and used is 913MHz, hence the highest scan frequency is up to 10GHz.

There was no emission higher than the limit.
Detailed test graphs and test data refer clause 5.1.2.

Prüfbericht - Nr.: 17030908 001

Test Report No.

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5.1.4 Conducted emission**RESULT:****Pass**

Date of testing	:	2013-02-21
Test standard	:	FCC Part 15.207 RSS-210 Clause 2.6
Basic standard	:	ANSI C63.4: 2003
Frequency range	:	0.15 – 30MHz
Limits	:	FCC Part 15.207 Table 4 of RSS-Gen
Kind of test site	:	Shield room

Test setup

Input Voltage	:	AC 120V, 60Hz
Operation Mode	:	A
Earthing	:	Not Connected
Ambient temperature	:	25°C
Relative humidity	:	52%
Atmospheric pressure	:	101kPa

For details refer to following test plot.

Test Plot of Conducted emissions

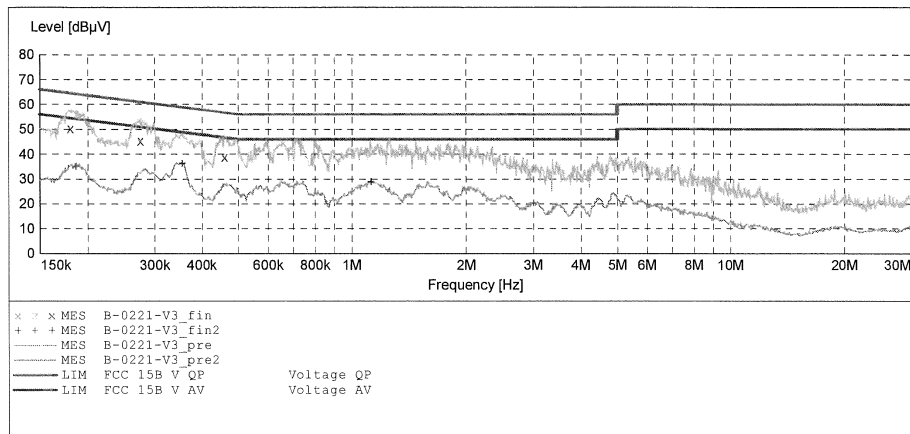
ACCURATE TECHNOLOGY CO., LTD

CONDUCTED EMISSION STANDARD FCC PART 15 B

EUT: TX of Wireless Headphone M/N:HP3190A
 Manufacturer: Unit-Art
 Operating Condition: TX 912MHz
 Test Site: 1#Shielding Room
 Operator: Bob
 Test Specification: L 120V/60Hz
 Comment: Mains Port
 Start of Test: 2/21/2013 / 8:47:01AM

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 0.8 % QuasiPeak 1.0 s 9 kHz NSLK8126 2008
 Average



MEASUREMENT RESULT: "B-0221-V3_fin"

2/21/2013 8:54AM

Frequency MHz	Level dBμV	Transd dB	Limit dBμV	Margin dB	Detector	Line	PE
0.180236	50.30	11.2	65	14.2	QP	L1	GND
0.275179	45.20	11.2	61	15.8	QP	L1	GND
0.460537	38.70	11.2	57	18.0	QP	L1	GND

MEASUREMENT RESULT: "B-0221-V3_fin2"

2/21/2013 8:54AM

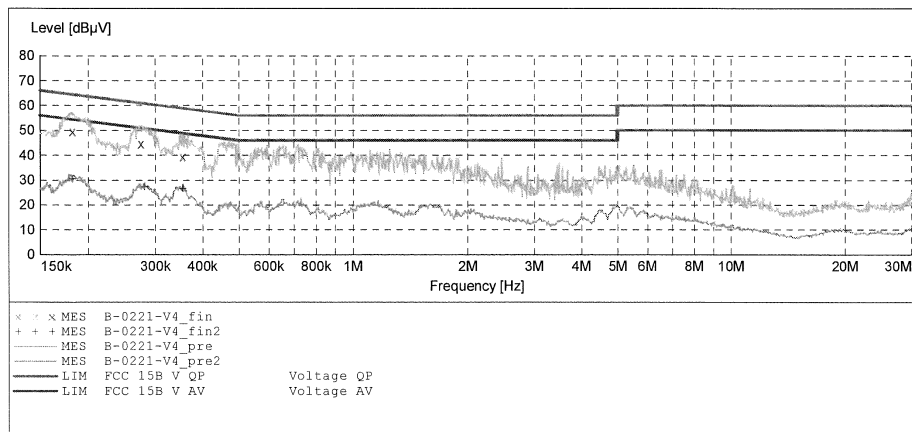
Frequency MHz	Level dBμV	Transd dB	Limit dBμV	Margin dB	Detector	Line	PE
0.186085	35.00	11.2	54	19.2	AV	L1	GND
0.355282	36.10	11.2	49	12.7	AV	L1	GND
1.126202	28.80	11.3	46	17.2	AV	L1	GND

ACCURATE TECHNOLOGY CO.,LTD
CONDUCTED EMISSION STANDARD FCC PART 15 B

EUT: TX of Wireless Headphone M/N:HP3190A
 Manufacturer: Unit-Art
 Operating Condition: TX 912MHz
 Test Site: 1#Shielding Room
 Operator: Bob
 Test Specification: N 120V/60Hz
 Comment: Mains Port
 Start of Test: 2/21/2013 / 8:54:45AM

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 0.8 % QuasiPeak 1.0 s 9 kHz NSLK8126 2008
 Average


MEASUREMENT RESULT: "B-0221-V4_fin"

2/21/2013 8:58AM

Frequency MHz	Level dBµV	Transd dB	Limit dBµV	Margin dB	Detector	Line	PE
0.181681	49.50	11.2	64	14.9	QP	N	GND
0.275179	44.40	11.2	61	16.6	QP	N	GND
0.355282	39.30	11.2	59	19.5	QP	N	GND

MEASUREMENT RESULT: "B-0221-V4_fin2"

2/21/2013 8:58AM

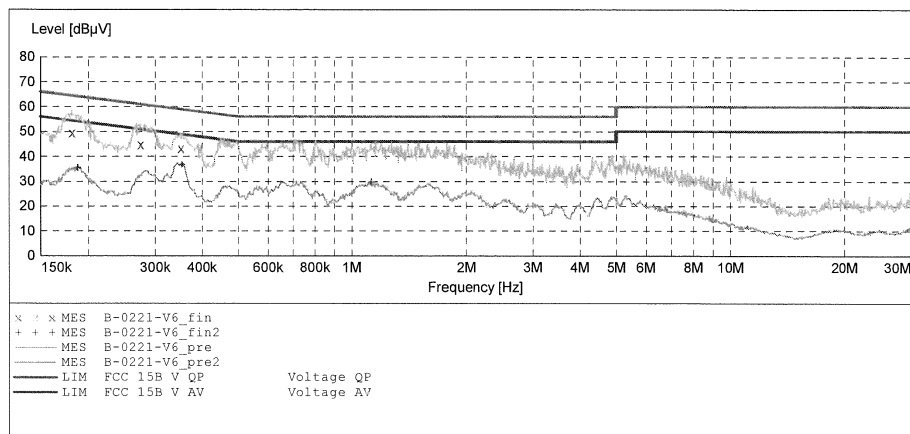
Frequency MHz	Level dBµV	Transd dB	Limit dBµV	Margin dB	Detector	Line	PE
0.181681	30.50	11.2	54	23.9	AV	N	GND
0.280727	27.20	11.2	51	23.6	AV	N	GND
0.355282	26.50	11.2	49	22.3	AV	N	GND

ACCURATE TECHNOLOGY CO.,LTD
CONDUCTED EMISSION STANDARD FCC PART 15 B

EUT: TX of Wireless Headphone M/N:HP3190A
 Manufacturer: Unit-Art
 Operating Condition: TX 912.5MHz
 Test Site: 1#Shielding Room
 Operator: Bob
 Test Specification: L 120V/60Hz
 Comment: Mains Port
 Start of Test: 2/21/2013 / 9:03:12AM

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 0.8 % QuasiPeak 1.0 s 9 kHz NSLK8126 2008
 Average


MEASUREMENT RESULT: "B-0221-V6_fin"

2/21/2013 9:06AM

Frequency MHz	Level dBµV	Transd dB	Limit dBµV	Margin dB	Detector	Line	PE
0.180957	49.40	11.2	64	15.0	QP	L1	GND
0.275179	44.80	11.2	61	16.2	QP	L1	GND
0.351053	43.10	11.2	59	15.8	QP	L1	GND

MEASUREMENT RESULT: "B-0221-V6_fin2"

2/21/2013 9:06AM

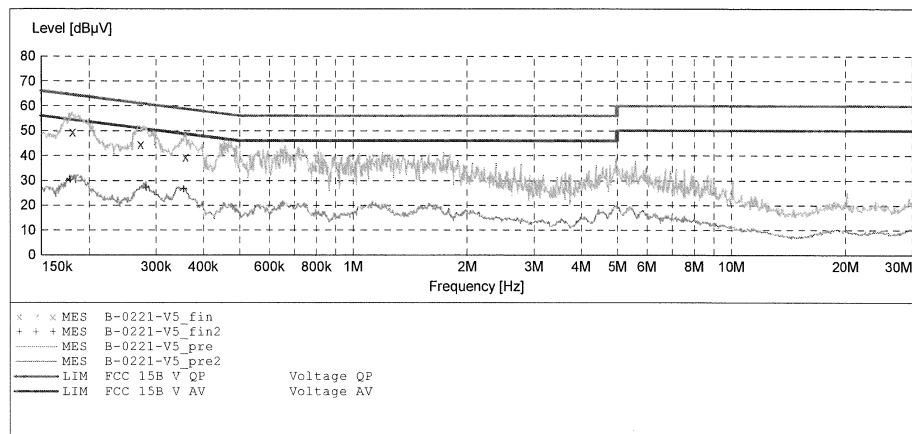
Frequency MHz	Level dBµV	Transd dB	Limit dBµV	Margin dB	Detector	Line	PE
0.187577	35.30	11.2	54	18.8	AV	L1	GND
0.353867	36.50	11.2	49	12.4	AV	L1	GND
1.126202	29.60	11.3	46	16.4	AV	L1	GND

ACCURATE TECHNOLOGY CO.,LTD
CONDUCTED EMISSION STANDARD FCC PART 15 B

EUT: TX of Wireless Headphone M/N:HP3190A
 Manufacturer: Unit-Art
 Operating Condition: TX 912.5MHz
 Test Site: 1#Shielding Room
 Operator: Bob
 Test Specification: N 120V/60Hz
 Comment: Mains Port
 Start of Test: 2/21/2013 / 8:58:36AM

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 0.8 % QuasiPeak 1.0 s 9 kHz NSLK8126 2008
 Average


MEASUREMENT RESULT: "B-0221-V5_fin"

2/21/2013 9:02AM

Frequency MHz	Level dBμV	Transd dB	Limit dBμV	Margin dB	Detector	Line	PE
0.180957	49.50	11.2	64	14.9	QP	N	GND
0.272991	44.40	11.2	61	16.6	QP	N	GND
0.359562	39.40	11.2	59	19.3	QP	N	GND

MEASUREMENT RESULT: "B-0221-V5_fin2"

2/21/2013 9:02AM

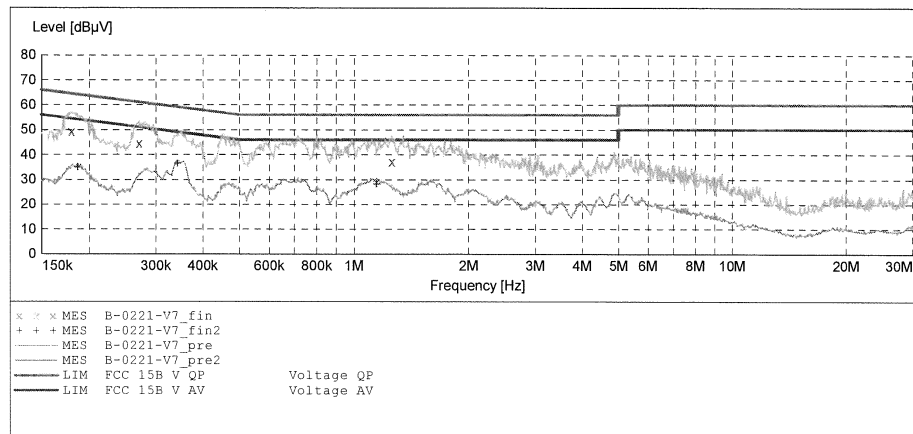
Frequency MHz	Level dBμV	Transd dB	Limit dBμV	Margin dB	Detector	Line	PE
0.178803	30.20	11.2	55	24.3	AV	N	GND
0.282977	27.00	11.2	51	23.7	AV	N	GND
0.355282	26.50	11.2	49	22.3	AV	N	GND

ACCURATE TECHNOLOGY CO., LTD
CONDUCTED EMISSION STANDARD FCC PART 15 B

EUT: TX of Wireless Headphone M/N:HP3190A
 Manufacturer: Unit-Art
 Operating Condition: TX 913MHz
 Test Site: 1#Shielding Room
 Operator: Bob
 Test Specification: L 120V/60Hz
 Comment: Mains Port
 Start of Test: 2/21/2013 / 9:06:52AM

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 0.8 % QuasiPeak 1.0 s 9 kHz NSLK8126 2008
 Average


MEASUREMENT RESULT: "B-0221-V7_fin"

2/21/2013 9:09AM

Frequency MHz	Level dBµV	Transd dB	Limit dBµV	Margin dB	Detector	Line	PE
0.179518	49.20	11.2	65	15.3	QP	L1	GND
0.270820	44.50	11.2	61	16.6	QP	L1	GND
1.259390	37.10	11.3	56	18.9	QP	L1	GND

MEASUREMENT RESULT: "B-0221-V7_fin2"

2/21/2013 9:09AM

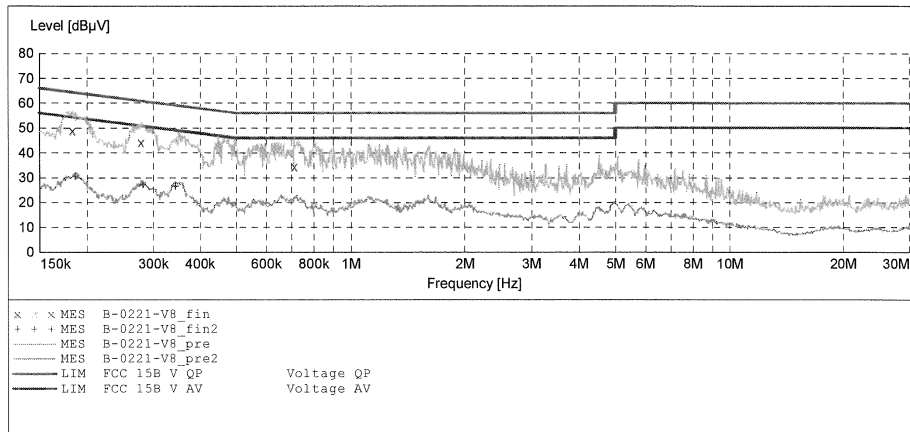
Frequency MHz	Level dBµV	Transd dB	Limit dBµV	Margin dB	Detector	Line	PE
0.186085	34.70	11.2	54	19.5	AV	L1	GND
0.342744	36.30	11.2	49	12.8	AV	L1	GND
1.148907	28.10	11.3	46	17.9	AV	L1	GND

ACCURATE TECHNOLOGY CO.,LTD
CONDUCTED EMISSION STANDARD FCC PART 15 B

EUT: TX of Wireless Headphone M/N:HP3190A
 Manufacturer: Unit-Art
 Operating Condition: TX 913MHz
 Test Site: 1#Shielding Room
 Operator: Bob
 Test Specification: N 120V/60Hz
 Comment: Mains Port
 Start of Test: 2/21/2013 / 9:10:32AM

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 0.8 % QuasiPeak 1.0 s 9 kHz NSLK8126 2008
 Average


MEASUREMENT RESULT: "B-0221-V8_fin"

2/21/2013 9:13AM

Frequency MHz	Level dBµV	Transd dB	Limit dBµV	Margin dB	Detector	Line	PE
0.183137	48.90	11.2	64	15.4	QP	N	GND
0.278495	44.10	11.2	61	16.8	QP	N	GND
0.711605	34.30	11.3	56	21.7	QP	N	GND

MEASUREMENT RESULT: "B-0221-V8_fin2"

2/21/2013 9:13AM

Frequency MHz	Level dBµV	Transd dB	Limit dBµV	Margin dB	Detector	Line	PE
0.186085	30.50	11.2	54	23.7	AV	N	GND
0.281850	27.00	11.2	51	23.8	AV	N	GND
0.344115	26.50	11.2	49	22.6	AV	N	GND

6. Safety Human exposure

6.1 Radio Frequency Exposure Compliance

6.1.1 Electromagnetic Fields

RESULT:**Pass**

Test standard : RSS-102 Issue 4
FCC KDB Publication 447498 v05

The maximum peak output power of the transmitter is 0.12mW (-9.23dBm) only, which less than 20mW. Hence the EUT is exempted from routine evaluation limits (SAR Evaluation) according to clause 2.5.1 of RSS-102 Issue 4.

The maximum peak output power of the transmitter is 0.12 mW, which far below than the SAR exclusion threshold level (Appendix B, SAR Test Exclusion Thresholds for 100 MHz – 6 GHz and >50 mm):

MHz	50	60	70	80	90	100	110	120	130	140	150	160	170	180	190	mm
900	158	218	278	338	398	458	518	578	638	698	758	818	878	938	998	mW

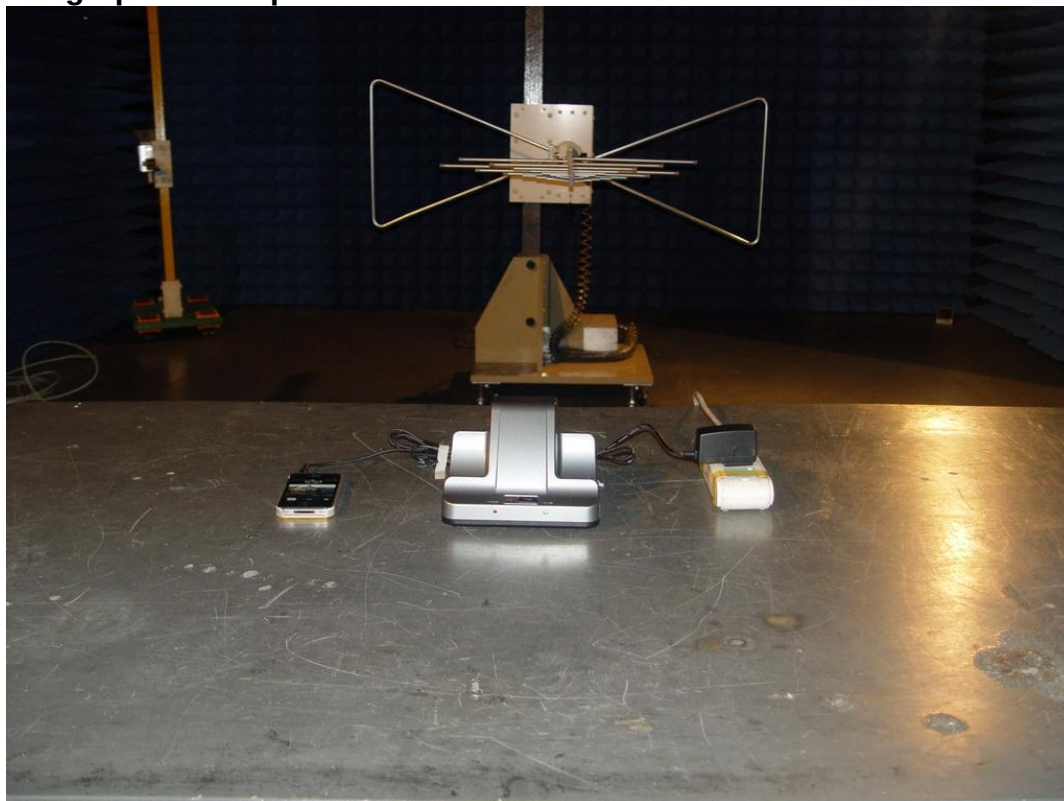
Therefore the transmitter is deemed comply with the requirement without SAR testing.

7. Photographs of the Test Set-Up

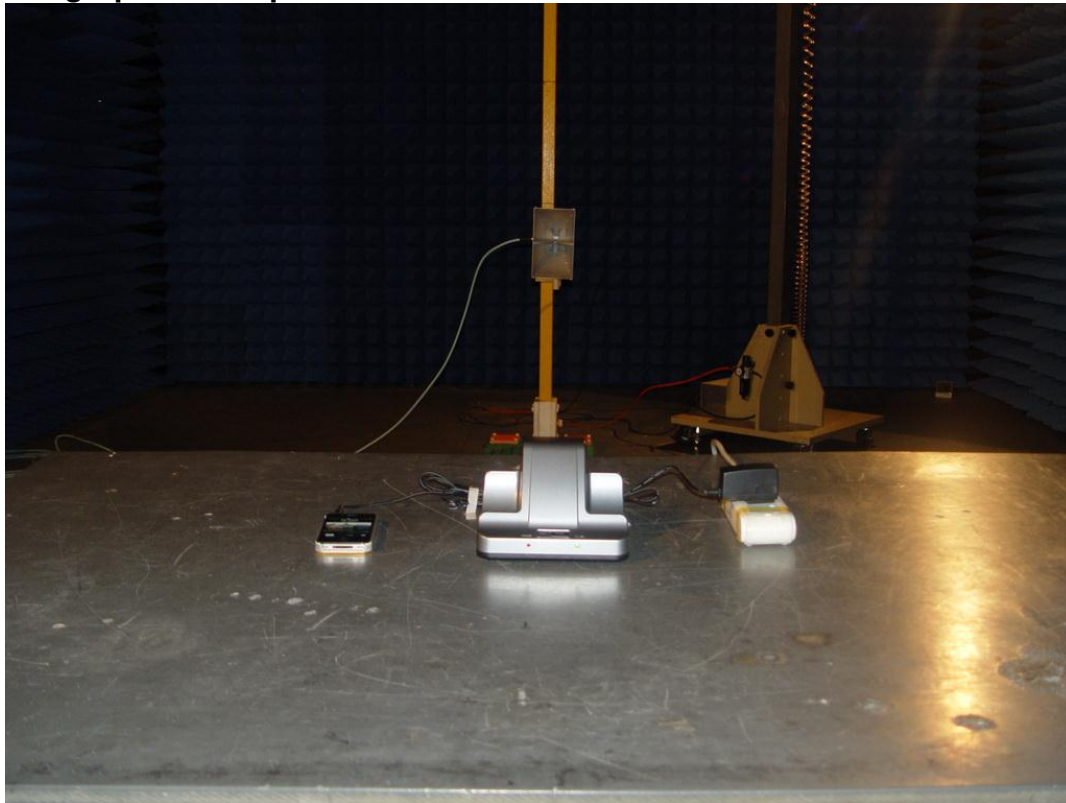
Photograph 1: Setup for Conducted Emission



Photograph 2: Setup for Radiated Emissions below 1GHz



Photograph 3: Setup for Radiated Emissions above 1GHz



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