FCC CERTIFICATION
On Behalf of
RAMSONS CORPORATION (H.K.)

Wireless Headphone
Model No.: HP4942

FCC ID: V48HP4942TX

Prepared for	:	RAMSONS CORPORATION (H.K.)
Address	:	EADER CENTRE, 6th FL., NO.B, 39-41 HANKOW ROAD, KOWLOON, HONG KONG
Prepared by	:	ACCURATE TECHNOLOGY CO. LTD
Address	:	F1, Bldg. A, Changyuan New Material Port, Keyuan Rd. Science & Industry Park, Nanshan, Shenzhen, Guangdong P.R. China Tel: (0755) 26503290 Fax: (0755) 26503396

Report Number	:	ATE20080336
Date of Test	:	March 05, 2008
Date of Report	:	March 07, 2008

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Description Page

Test Report Certification

Applicant	:	RAMSONS CORPORATION (H.K.)
Manufacturer	:	Tanya Electronics Company Limited
EUT Description	:	Wireless Headphone
		(A) MODEL NO.: HP4942
		(B) SERIAL NO.: N/A
		(C) POWER SUPPLY: DC 3.0V (AAA Battery ×2)

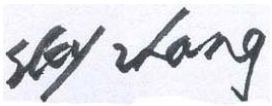
Measurement Procedure Used:

FCC Rules and Regulations Part 15 Subpart C Section 15.239: 2007 & ANSI C63.4:2003

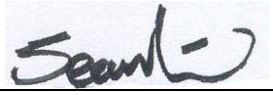
The device described above is tested by ACCURATE TECHNOLOGY CO. LTD to determine the maximum emission levels emanating from the device. The maximum emission levels are compared to the FCC Part 15 Subpart C Section15.239 limits. The measurement results are contained in this test report and ACCURATE TECHNOLOGY CO. LTD is assumed full responsibility for the accuracy and completeness of these measurements. Also, this report shows that the Equipment Under Test (EUT) is to be technically compliant with the FCC requirements.

This report applies to above tested sample only. This report shall not be reproduced in part without written approval of ACCURATE TECHNOLOGY CO. LTD.

Date of Test : March 05, 2008

Prepared by : 

(Engineer)

Reviewer : 

(Quality Manager)

Approved & Authorized Signer : 

(Manager)

1. GENERAL INFORMATION

1.1.Description of Device (EUT)

EUT	:	Wireless Headphone
Model Number	:	HP4942
Power Supply	:	DC 3.0V (AAA Battery ×2)
Operate Frequency	:	88.5MHz
Channel	:	1
iPod	:	Manufacturer: Apple M/N: A1136 S/N: JQ543GF9SZA
Applicant	:	RAMSONS CORPORATION (H.K.)
Address	:	EADER CENTRE, 6th FL., NO.B, 39-41 HANKOW ROAD, KOWLOON, HONG KONG
Manufacturer	:	Tanya Electronics Company Limited
Address	:	Rm.501, Xianke Jidian Bldg., Rd Bagua 4th, Futian District, Shenzhen, China, 518029
Date of sample received	:	March 03, 2008
Date of Test	:	March 05, 2008

1.2.Description of Test Facility

EMC Lab	:	Listed by FCC The Registration Number is 274801 Listed by Industry Canada The Registration Number is IC4174 Accredited by China National Accreditation Committee for Laboratories The Certificate Registration Number is L0579
Name of Firm	:	Shenzhen Academy of Metrology& Quality Inspection
Site Location	:	Bldg. Metrology& Quality Inspection, Longzhu Road, Nanshan, Shenzhen, Guangdong, P.R. China

1.3.Measurement Uncertainty

Conducted emission expanded uncertainty = 3.5dB, k=2

Radiated emission expanded uncertainty = 4.5dB, k=2

2. MEASURING DEVICE AND TEST EQUIPMENT

Table 1: List of Test and Measurement Equipment

Kind of equipment	Manufacturer	Type	S/N	Calibrated until
EMI Test Receiver	Rohde&Schwarz	ESCS30	100307	03.31.2008
EMI Test Receiver	Rohde&Schwarz	ESI26	838786/013	01.23.2009
Bilog Antenna	Schwarzbeck	VULB9163	9163-194	03.31.2008
Bilog Antenna	Chase	CBL6112B	2591	01.23.2009
Horn Antenna	Rohde&Schwarz	HF906	100013	01.23.2009
Spectrum Analyzer	Anritsu	MS2651B	6200238856	03.31.2008
Pre-Amplifier	Agilent	8447D	2944A10619	03.31.2008

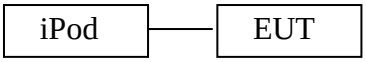
3. SUMMARY OF TEST RESULTS

FCC Rules	**Description of Test**	**Result**
Section 15.207	Conducted Emission	N/A
Section 15.209 Section 15.239(c)	Radiated Emission	Compliant
Section 15.239(b)	Fundamental Radiated Emission	Compliant
Section 15.239(a)(1)	Occupied Bandwidth	Compliant

4. RADIATED EMISSION FOR FCC PART 15 SECTION 15.239(C)

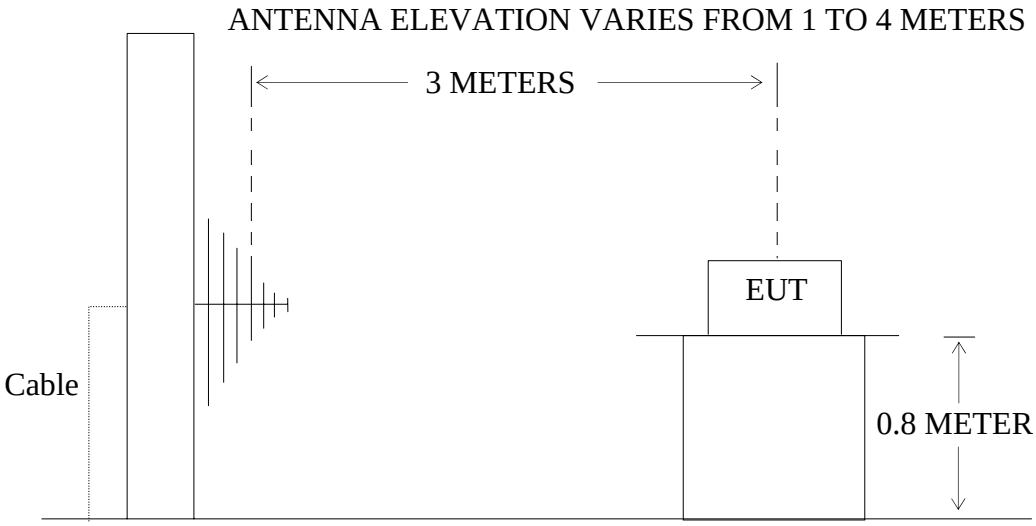
4.1.Block Diagram of Test Setup

4.1.1.Block diagram of connection between the EUT and simulators



(EUT: Wireless Headphone)

4.1.2.Anechoic Chamber Test Setup Diagram



(EUT: Wireless Headphone)

4.2.The Emission Limit for section 15.239(c)

4.2.1 The field strength of any emissions radiated on any frequency outside of the specified 200kHz band shall not exceed the general radiated emission limits in section 15.209

Radiation Emission Measurement Limits According to Section 15.209

Frequency (MHz)	Limit,		
	Field Strength of Quasi-peak Value (microvolts/m)	Field Strength of Quasi-peak Value (dBμV/m)	The final measurement in band 9-90kHz, 110-490kHz and above 1000MHz is performed with Average detector. Except those frequency bands
30 - 88	100	40	
88 - 216	150	43.5	

216 - 960	200	46	mention above, the final measurement for frequencies below 1000MHz is performed with Quasi Peak detector.
Above 960	500	54	

4.3. Configuration of EUT on Measurement

The following equipment are installed on Radiated Emission Measurement to meet the commission requirements and operating regulations in a manner which tends to maximize its emission characteristics in normal application.

4.3.1. Wireless Headphone (EUT)

Model Number : HP4942
Serial Number : N/A
Manufacturer : Tanya Electronics Company Limited

4.4. Operating Condition of EUT

4.4.1. Setup the EUT and simulator as shown as Section 4.1.

4.4.2. Turn on the power of all equipment.

Let the EUT work in TX modes [Connect EUT audio cable to iPod headphone jack and iPod playing typical audio signal(music song) with maximum audio level] measure it.

Note: The EUT is connected to iPod by the base interface of iPod. The input signal of EUT is controlled by iPod. so the volume control of iPod was set to maximum during the test. It means that the test was performed with the maximum audio input.

4.5. Test Procedure

The EUT and its simulators are placed on a turntable, which is 0.8 meter high above ground. The turntable can rotate 360 degrees to determine the position of the maximum emission level. EUT is set 3.0 meters away from the receiving antenna, which is mounted on an antenna tower. The antenna can be moved up and down between 1.0 meter and 4 meters to find out the maximum emission level. Broadband antenna (calibrated bilog antenna) is used as receiving antenna. Both horizontal and vertical polarizations of the antenna are set on measurement. In order to find the maximum emission levels, all of the interface cables must be manipulated according to ANSI C63.4: 2003 on radiated emission measurement.

The bandwidth of test receiver (R&S ESCS30) is set at 120KHz in 30-1000MHz; Set at 1MHz in above 1000MHz.

The frequency range from 30MHz to 1000MHz is checked.

The final measurement in band 9-90kHz, 110-490kHz and above 1000MHz is performed with Average detector. Except those frequency bands mention above, the final measurement for frequencies below 1000MHz is performed with Quasi Peak detector.

4.6. The Field Strength of Radiation Emission Measurement Results

PASS.

The frequency range 30MHz to 1000MHz is investigated.

Date of Test:	March 05, 2008	Temperature:	25°C
EUT:	Wireless Headphone	Humidity:	46%
Model No.:	HP4942	Power Supply:	DC 3.0V (AAA Battery ×2)
Test Mode:	TX	Test Engineer:	Feng

Polarization	Frequency (MHz)	Reading(dBμV/m) QP	Factor Corr.(dB)	Result(dBμV/m) QP	Limits(dBμV/m) QP	Margin(dBμV/m) QP
Horizontal	177.028	23.3	8.0	31.3	43.5	12.2
Horizontal	*265.591	26.3	10.9	37.2	46.0	8.8
Horizontal	354.055	24.9	14.0	38.9	46.0	7.1
Horizontal	442.618	21.2	15.9	37.1	46.0	8.9
Horizontal	531.083	16.1	17.5	33.6	46.0	12.4
Horizontal	619.747	15.3	18.8	34.1	46.0	11.9
Horizontal	708.713	13.3	20.0	33.3	46.0	12.7
Horizontal	796.677	14.8	21.0	35.8	46.0	10.2
Horizontal	884.642	10.9	22.0	32.9	46.0	13.1
Horizontal	*973.605	9.3	22.8	32.1	54.0	21.9
Vertical	177.027	19.9	8.5	28.4	43.5	15.1
Vertical	*265.592	29.0	9.9	38.8	46.0	7.2
Vertical	354.054	25.4	14.0	39.4	46.0	6.6
Vertical	442.616	16.1	16.4	32.5	46.0	13.5
Vertical	531.084	16.7	18.2	34.9	46.0	11.1
Vertical	619.746	16.1	19.9	36.0	46.0	10.0
Vertical	708.713	11.4	21.4	32.8	46.0	13.2
Vertical	796.676	11.4	22.6	34.0	46.0	12.0
Vertical	884.643	9.1	23.7	32.8	46.0	13.2
Vertical	*973.603	8.6	24.7	33.3	54.0	20.7

Note:

1. The spectral diagrams in appendix 1 display the measurement of peak values with corrected factors counted.
2. *: Denotes restricted band of operation.
3. The field strength is calculated by adding the antenna factor, high pass filter loss(if used) and cable loss, and subtracting the amplifier gain(if any)from the measured reading. The basic equation calculation is as follows:

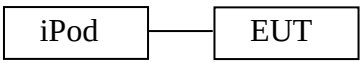
Result = Reading + Corrected Factor

Where Corrected Factor = Antenna Factor + Cable Loss + High Pass Filter Loss – Amplifier Gain

5. FUNDAMENTAL RADIATED EMISSION FOR FCC PART 15 SECTION 15.239(B)

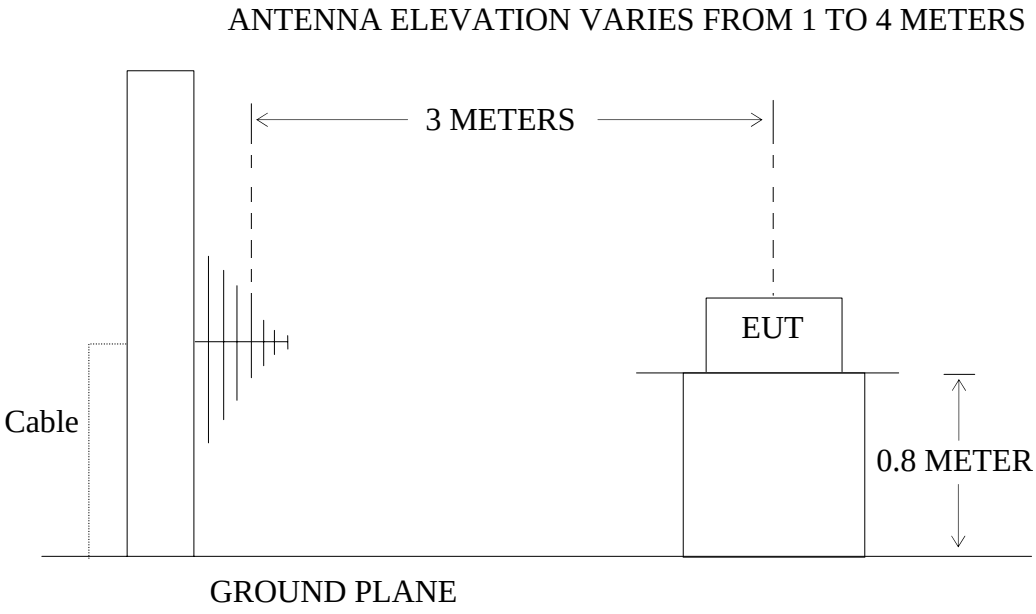
5.1.Block Diagram of Test Setup

5.1.1.Block diagram of connection between the EUT and simulators



(EUT: Wireless Headphone)

5.1.2.Anechoic Chamber Test Setup Diagram



(EUT: Wireless Headphone)

5.2.The Emission Limit For Section 15.239(b)

5.2.1 The field strength of any emission within the permitted 200kHz band shall not exceed 250microvolts/meter at 3 meters. The emission limit in this paragraph is based on measurement instrumentation employing an average detector. The provisions in section 15.35 for limiting peak emissions apply.

5.3.EUT Configuration on Measurement

The following equipment are installed on the emission Measurement to meet the commission requirements and operating regulations in a manner which tends to maximize its emission characteristics in normal application.

5.3.1.Wireless Headphone (EUT)

Model Number	**:**	HP4942
Serial Number	**:**	N/A
Manufacturer	**:**	Tanya Electronics Company Limited

5.4.Operating Condition of EUT

5.4.1.Setup the EUT and simulator as shown as Section 5.1.

5.4.2.Turn on the power of all equipment.

Let the EUT work in TX modes [Connect EUT audio cable to iPod headphone jack and iPod playing typical audio signal(music song) with maximum audio level] measure it.

Note: The EUT is connected to iPod by the base interface of iPod. The input signal of EUT is controlled by iPod. so the volume control of iPod was set to maximum during the test. It means that the test was performed with the maximum audio input.

5.5.Test Procedure

The EUT and its simulators are placed on a turntable, which is 0.8 meter high above ground. The turntable can rotate 360 degrees to determine the position of the maximum emission level. EUT is set 3.0 meters away from the receiving antenna, which is mounted on an antenna tower. The antenna can be moved up and down between 1.0 meter and 4 meters to find out the maximum emission level. Broadband antenna (calibrated bilog antenna) is used as receiving antenna. Both horizontal and vertical polarizations of the antenna are set on measurement. In order to find the maximum emission levels, all of the interface cables must be manipulated according to ANSI C63.4: 2003 on radiated emission measurement.

5.6.The Emission Measurement Result

PASS.

Date of Test:	March 05, 2008	Temperature:	25°C
EUT:	Wireless Headphone	Humidity:	46%
Model No.:	HP4942	Power Supply:	DC 3.0V (AAA Battery ×2)
Test Mode:	TX	Test Engineer:	Feng

Fundamental Radiated Emissions

Frequency (MHz)	Reading(dBμV/m)		Factor(dB) Corr.	Result(dBμV/m)		Limit(dBμV/m)		Margin(dBμV/m)		Polarization
	AV	PEAK		AV	PEAK	AV	PEAK	AV	PEAK	
88.5	36.2	41.7	6.3	42.5	48.0	48	68	5.5	20.0	Vertical
88.5	31.4	36.7	8.6	40.0	45.3	48	68	8.0	22.7	Horizontal

The field strength is calculated by adding the antenna factor, high pass filter loss(if used) and cable loss, and subtracting the amplifier gain(if any)from the measured reading. The basic equation calculation is as follows:

Result = Reading + Corrected Factor

Where Corrected Factor = Antenna Factor + Cable Loss + High Pass Filter Loss – Amplifier Gain

6. OCCUPIED BANDWIDTH FOR FCC PART 15 SECTION 15.239(A)

6.1.The Requirement For Section 15.239(a)

6.1.1. Emission from the device shall be confined within a band 200kHz wide centered on the operating frequency. The 200kHz band shall lie wholly within the frequency range of 88-108MHz.

6.2.EUT Configuration on Measurement

The following equipment are installed on the emission Measurement to meet the commission requirements and operating regulations in a manner which tends to maximize its emission characteristics in normal application.

6.2.1.Wireless Headphone (EUT)

Model Number	**:**	HP4942
Serial Number	**:**	N/A
Manufacturer	**:**	Tanya Electronics Company Limited

6.3.Operating Condition of EUT

6.3.1.Setup the EUT and simulator as shown as Section 5.1.

6.3.2.Turn on the power of all equipment.

Let the EUT work in TX modes [Connect EUT audio cable to iPod headphone jack and iPod playing typical audio signal(music song) with maximum audio level] measure it.

Note: The EUT is connected to iPod by the base interface of iPod. The input signal of EUT is controlled by iPod. so the volume control of iPod was set to maximum during the test. It means that the test was performed with the maximum audio input.

6.4.Test Procedure

6.4.1. The EUT was placed on a turn table which is 0.8m above ground plane.
6.4.2. Set EUT as normal operation. Playing MP3.(the volume control of iPod was set to maximum.)
6.4.3. Set EMI test receiver Center Frequency = fundamental frequency, RBW=3kHz, VBW= 10kHz, Span=250kHz.
6.4.4. Set EMI test receiver Max hold. Mark peak, -26dB.

6.5.Test Result

The EUT does meet the FCC requirement.

Input signal : play typical audio signal(music song)
FM 88.5MHz
-26dB bandwidth = 24.0kHz

7. TUNING RANGE

7.1. The Requirement For Section 15.239

88-108MHz

7.2. EUT Configuration on Measurement

The following equipment are installed on the emission Measurement to meet the commission requirements and operating regulations in a manner which tends to maximize its emission characteristics in normal application.

7.2.1. Wireless Headphone (EUT)

Model Number	**:**	HP4942
Serial Number	**:**	N/A
Manufacturer	**:**	Tanya Electronics Company Limited

7.3. Operating Condition of EUT

7.3.1. Setup the EUT and simulator as shown as Section 5.1.

7.3.2. Turn on the power of all equipment.

Let the EUT work in TX modes

7.4. Test Procedure

7.4.1. The EUT was placed on a turn table which is 0.8m above ground plane.
7.4.2. Set the EUT working on the working frequency.
7.4.3. Set EMI test receiver center frequency = working frequency, RBW=3kHz, VBW= 10kHz, Span=250kHz.
7.4.4. Measuring the working frequency.
7.4.5. The working frequency should be inside 88-108MHz.

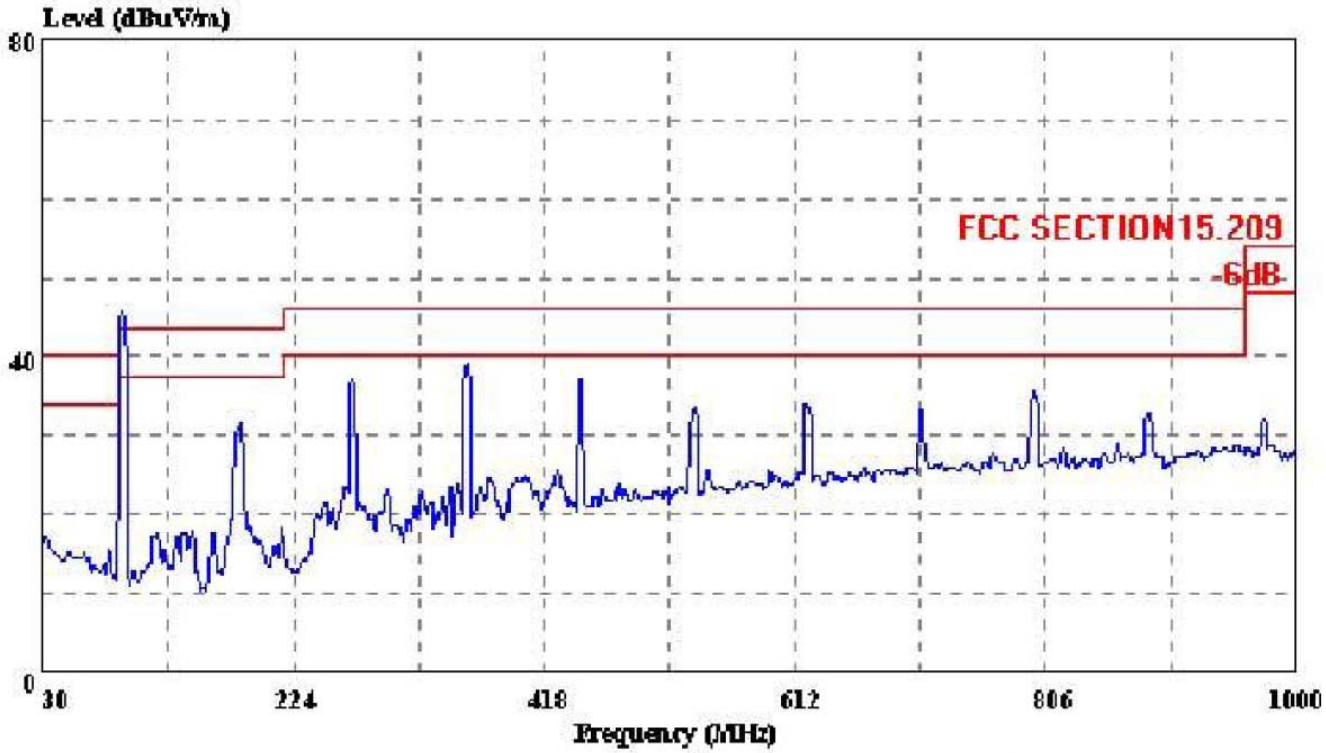
7.5.Test Result

The EUT does meet the FCC requirement.

Working Frequency= 88.480MHz

The working frequency can not to be displayed and adjusted on EUT.
The EUT has only one working frequency.

APPENDIX I
(Test Curves)



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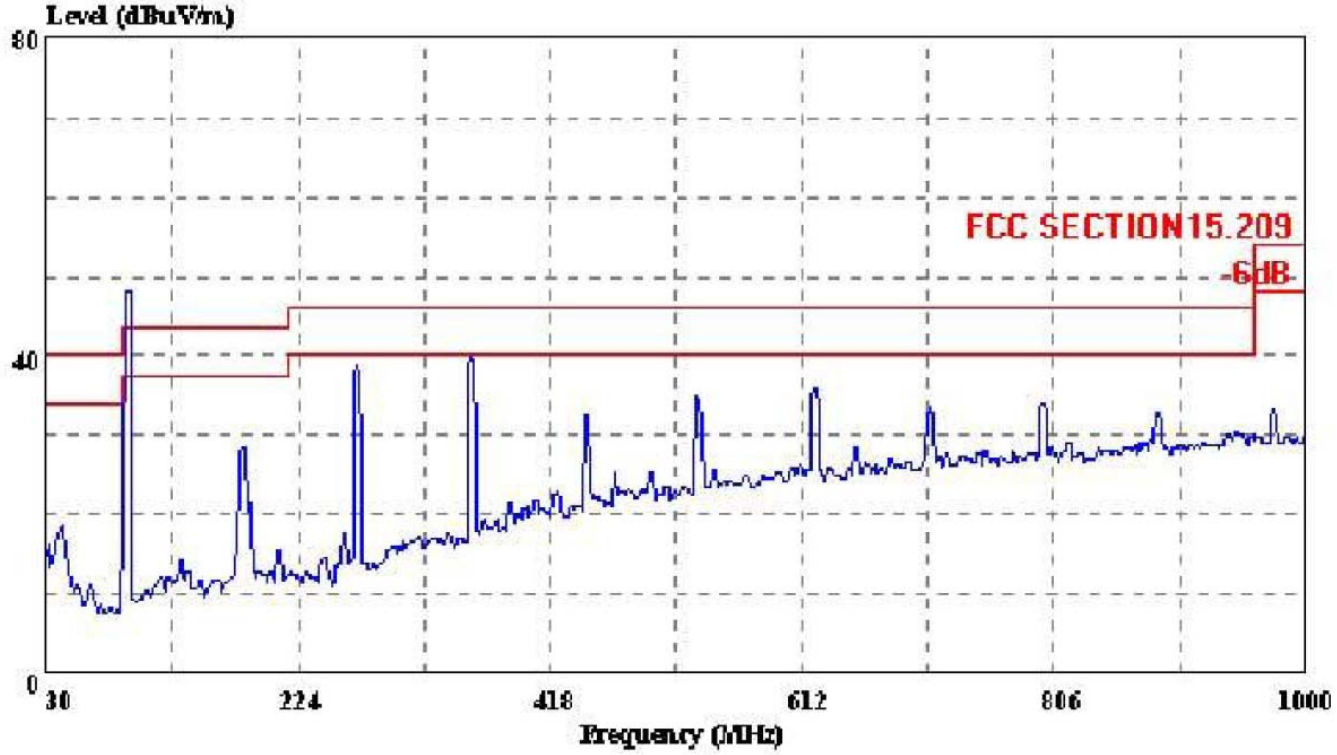
eut : WIRELESS HEADPHONE M/N:HP4942
power : DC 3.0V
memo : TX
manuf : RAMSONS
sample no.: 080566
report no.: ATE20080336



Trace: Ref Trace:

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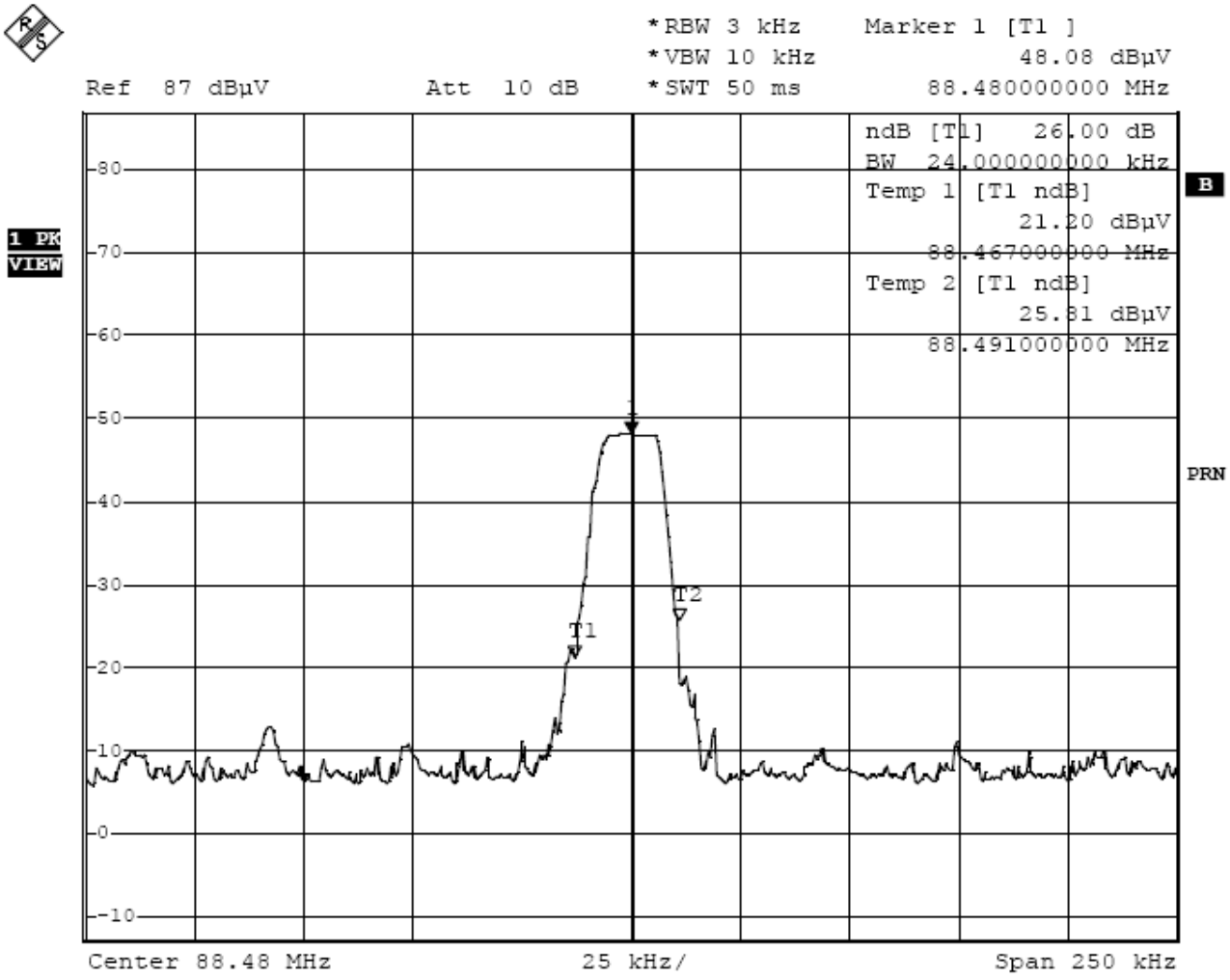
power : DC 3.0V
memo : TX
manuf : RAMSONS
sample no.: 080566
report no.: ATE20080336


*RBW 3 kHz
*VBW 10 kHz
*SWT 50 ms
Marker 1 [T1]
48.08 dBµV
88.480000000 MHz
Ref 87 dBµV
Att 10 dB
ndB [T1] 26.00 dB
BW 24.000000000 kHz
Temp 1 [T1 ndB]
21.20 dBµV
88.467000000 MHz
Temp 2 [T1 ndB]
25.81 dBµV
88.491000000 MHz
1 PK
VIEW
B
PRN
80
70
60
50
40
30
20
10
0
-10
T1
T2
Center 88.48 MHz
25 kHz/
Span 250 kHz