# APPLICATION CERTIFICATION FCC Part 15B On Behalf of HONG KONG NATURAL SOUND ELECTRONICS LIMITED

## MP4

Model No.: ID1829C, Eclipse-180

FCC ID: PWK-ID1829C

Prepared for : HONG KONG NATURAL SOUND ELECTRONICS

LIMITED

Address : FLAT/RM M 4/F CONTINENTAL MANSION 300

KING'S ROAD HONG KONG

Prepared by : ACCURATE TECHNOLOGY CO. LTD

Address : F1, Bldg. A, Changyuan New Material Port, Keyuan Rd.

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Report Number : ATE20122302

Date of Test : September 28-October 15, 2012

Date of Report : October 15, 2012

## TABLE OF CONTENTS

Description	Page

Test R	Report Certification	
1. G	ENERAL INFORMATION	4
1.1.	Description of Device (EUT)	
1.2.	Accessory and Auxiliary Equipment	
1.3.	Description of Test Facility	
1.4.	Measurement Uncertainty	
2. M	IEASURING DEVICE AND TEST EQUIPMENT	6
3. O	PERATION OF EUT DURING TESTING	7
3.1.	Operating Mode	7
3.2.	Configuration and peripherals	
4. TI	EST PROCEDURES AND RESULTS	
5. C	ONDUCTED EMISSION FOR FCC PART 15 SECTION 15.107(A)	9
5.1.	Block Diagram of Test Setup	
5.2.	The Emission Limit	
5.3.	Configuration of EUT on Measurement	10
5.4.	Operating Condition of EUT	10
5.5.	Test Procedure	10
5.6.	Power Line Conducted Emission Measurement Results	11
6. R	ADIATED EMISSION FOR FCC PART 15 SECTION 15.109(A)	17
6.1.	Block Diagram of Test Setup	17
6.2.	The Emission Limit For Section 15.109 (a)	
6.3.	EUT Configuration on Measurement	
6.4.	Operating Condition of EUT	
6.5.	Test Procedure	
6.6	The Emission Measurement Result	

## **Test Report Certification**

Applicant : HONG KONG NATURAL SOUND ELECTRONICS LIMITED

Manufacturer : Shenzhen Natural Sound Electronics Co., Ltd.

**EUT Description**: MP4

(A) MODEL NO.: ID1829C, Eclipse-180

(B) SERIAL NO.: N/A

(C) POWER SUPPLY: DC 3.7V (Li-polymer battery) & DC 5V (Power by

PC)

Measurement Procedure Used:

# FCC Rules and Regulations Part 15 Subpart B ANSI C63.4: 2009

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 B 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 :	September 28-October 15, 2012
Prepared by :	Apple Lu
	(Apple Lv, Engineer)
Approved & Authorized Signer:	Lemil
	(Sean Liu, Manager)

## 1. GENERAL INFORMATION

1.1.Description of Device (EUT)

EUT : MP4

Model Number : ID1829C, Eclipse-180

(Note: These samples are same except for the appearance is difference. So we prepare the ID1829C for FCC test.)

Power Supply : DC 3.7V (Li-polymer battery) & DC 5V (Power by PC)

Highest operation : 107.9MHz

frequency of the EUT:

Applicant : HONG KONG NATURAL SOUND ELECTRONICS

LIMITED

Address : FLAT/RM M 4/F CONTINENTAL MANSION 300

KING'S ROAD HONG KONG

Manufacturer : Shenzhen Natural Sound Electronics Co., Ltd.

Address : 4<sup>th</sup> Building, Xinyuan Industrial Zone, Gushu Village,

Bao'an District, Shenzhen, China

Date of sample received: September 28, 2012

Date of Test : September 28-October 15, 2012

## 1.2. Accessory and Auxiliary Equipment

1.2.1.PC

Notebook PC : Manufacturer: SONY

M/N: PCG-663P

S/N: 28123170 7202526

1.2.2.Printer

Printer : Manufacturer: Canon

M/N: BJC-1000SP

S/N: N/A

## 1.3. Description of Test Facility

EMC Lab : Accredited by TUV Rheinland Shenzhen

Listed by FCC

The Registration Number is 752051

Listed by Industry Canada

The Registration Number is 5077A-2

Accredited by China National Accreditation Committee

for Laboratories

The Certificate Registration Number is L3193

Name of Firm : ACCURATE TECHNOLOGY CO. LTD

Site Location : F1, Bldg. A, Changyuan New Material Port, Keyuan Rd.

Science & Industry Park, Nanshan, Shenzhen, Guangdong

P.R. China

## 1.4. Measurement Uncertainty

Conducted Emission Expanded Uncertainty = 2.23dB, k=2

Radiated emission expanded uncertainty = 3.08dB, k=2

(9kHz-30MHz)

Radiated emission expanded uncertainty = 4.42dB, k=2

(30MHz-1000MHz)

Radiated emission expanded uncertainty = 4.06dB, k=2

(Above 1GHz)

# 2. MEASURING DEVICE AND TEST EQUIPMENT

**Table 1: List of Test and Measurement Equipment** 

Kind of equipment	Manufacturer	Туре	S/N	Calibrated date	Calibrated until
EMI Test Receiver	Rohde&Schwarz	ESCS30	100307	Jan. 8, 2012	Jan. 7, 2013
EMI Test Receiver	Rohde&Schwarz	ESPI3	101526/003	Jan. 8, 2012	Jan. 7, 2013
Spectrum Analyzer	Agilent	E7405A	MY45115511	Jan. 8, 2012	Jan. 7, 2013
Pre-Amplifier	Rohde&Schwarz	CBLU118354 0-01	3791	Jan. 8, 2012	Jan. 7, 2013
Loop Antenna	Schwarzbeck	FMZB1516	1516131	Jan. 8, 2012	Jan. 7, 2013
Bilog Antenna	Schwarzbeck	VULB9163	9163-323	Jan. 8, 2012	Jan. 7, 2013
Horn Antenna	Schwarzbeck	BBHA9120D	9120D-655	Jan. 8, 2012	Jan. 7, 2013
Horn Antenna	Schwarzbeck	BBHA9170	9170-359	Jan. 8, 2012	Jan. 7, 2013
LISN	Rohde&Schwarz	ESH3-Z5	100305	Jan. 8, 2012	Jan. 7, 2013
LISN	Schwarzbeck	NSLK8126	8126431	Jan. 8, 2012	Jan. 7, 2013

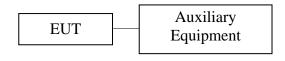
## 3. OPERATION OF EUT DURING TESTING

## 3.1.Operating Mode

The modes are used: 1) Playing

- 2) Transfer data
- 3) Camera playing
- 4) Charging
- 5) FM Radio

## 3.2.Configuration and peripherals



(EUT: MP4)

# 4. TEST PROCEDURES AND RESULTS

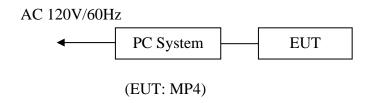
FCC Rules	Description of Test	Result
Section 15.107	Conducted Emission Test	Compliant
Section 15.109	Radiated Emission Test	Compliant

# 5. CONDUCTED EMISSION FOR FCC PART 15 SECTION 15.107(A)

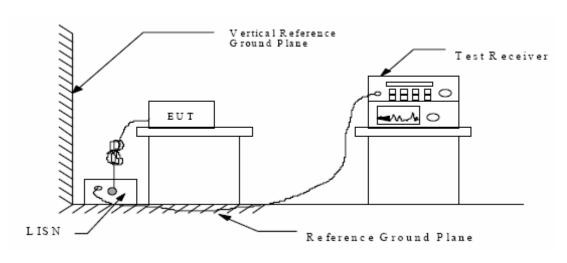
## 5.1.Block Diagram of Test Setup

5.1.1.Block diagram of connection between the EUT and simulators

## 5.1.1.1. For Transfer data and Charging



## 5.1.2. Shielding Room Test Setup Diagram



(EUT: MP4)

#### 5.2. The Emission Limit

#### 5.2.1.Conducted Emission Measurement Limits According to Section 15.107(a)

Frequency	Limit $dB(\mu V)$				
(MHz)	Quasi-peak Level	Average Level			
0.15 - 0.50	66.0 - 56.0 *	56.0 – 46.0 *			
0.50 - 5.00	56.0	46.0			
5.00 - 30.00	60.0	50.0			

<sup>\*</sup> Decreases with the logarithm of the frequency.

## 5.3. Configuration of EUT on Measurement

The following equipment are installed on the Conducted 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.MP4 (EUT)

Model Number : ID1829C Serial Number : N/A

Manufacturer : Shenzhen Natural Sound Electronics Co., Ltd.

## 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.
- 5.4.3.Let the EUT work in modes (Charging, Transfer data) and measure it.

#### 5.5.Test Procedure

The EUT is put on the plane 0.8m high above the ground by insulating support and is connected to the power mains through a line impedance stabilization network (L.I.S.N.). This provides a 50ohm coupling impedance for the EUT system. Please refer the block diagram of the test setup and photographs. Both sides of AC lines are checked to find out the maximum conducted emission. In order to find the maximum emission levels, the relative positions of equipment and all of the interface cables shall be changed according to ANSI C63.4: 2009 on Conducted Emission Measurement.

The bandwidth of test receiver (R & S ESCS30) is set at 9kHz.

The frequency range from 150kHz to 30MHz is checked.

## 5.6. Power Line Conducted Emission Measurement Results

**PASS.**The frequency range from 150kHz to 30MHz is checked.

Date of Test:October 9, 2012Temperature:25°CEUT:MP4Humidity:50%Model No.:ID1829CPower Supply:AC 120V/60HzTest Mode:ChargingTest Engineer:PEI

Frequency MHz	Level dBµV	Transd dB	Limit dBµV	Margin dB	Detector	Line	PE
0.613500 1.356000 12.763500	32.70 35.30 47.20	12.0 11.8 11.2	56 56 60	23.3 20.7 12.8	QP QP QP	L1 L1 L1	GND GND GND
Frequency MHz	Level dBµV	Transd dB	Limit dBµV	Margin dB	Detector	Line	PE
1.356000 12.493500 12.768000	30.70 45.80 47.30	11.8 11.2 11.2	46 50 50	15.3 4.2 2.7		L1 L1 L1	GND GND GND
Frequency MHz	Level dBµV	Transd dB	Limit dBµV	Margin dB	Detector	Line	PE
0.613500 1.563000 12.646500	32.70 34.10 47.00	12.0 11.7 11.2		23.3 21.9 13.0	~	N N N	GND GND GND
Frequency MHz	Level dBµV	Transd dB	Limit dBµV	Margin dB	Detector	Line	PE
12.574500 12.579000 12.849000	42.30 45.20 44.20	11.2 11.2 11.2	50 50 50	7.7 4.8 5.8	AV AV AV	N N N	GND GND GND

Emissions attenuated more than 20 dB below the permissible value are not reported. The spectral diagrams are attached as below.

Date of Test:October 9, 2012Temperature:25°CEUT:MP4Humidity:50%Model No.:ID1829CPower Supply:AC 120V/60HzTest Mode:Transfer dataTest Engineer:PEI

Frequency MHz	Level dBµV	Transd dB	Limit dBµV	Margin dB	Detector	Line	PE
0.675618	33.80	11.9	56	22.2	QP	N	GND
1.556134	32.50	11.7	56	23.5	QP	N	GND
12.705153	38.50	11.2	60	21.5	QP	N	GND
Frequency MHz	Level dBµV	Transd dB	Limit dBµV	Margin dB	Detector	Line	PE
11.824236	41.80	11.2	50	8.2	AV	N	GND
12.159314	42.00	11.2	50	8.0	AV	N	GND
12.705153	40.90	11.2	50	9.1	AV	N	GND
Frequency MHz	Level dBµV	Transd dB	Limit dBµV	Margin dB	Detector	Line	PE
0.202358	43.40	11.2	64	20.1	QP	L1	GND
12.404453	47.90	11.2	60	12.1	QP	L1	GND
12.806998	46.60	11.2	60	13.4	QP	L1	GND
Frequency MHz	Level dBµV	Transd dB	Limit dBµV	Margin dB	Detector	Line	PE
12.604118	43.70	11.2	50	6.3	AV	L1	GND
12.806998	43.00	11.2	50	7.0	AV	L1	GND
13.013142	45.70	11.2	50	4.3	AV	L1	GND

Emissions attenuated more than 20 dB below the permissible value are not reported. The spectral diagrams are attached as below.

#### CONDUCTED EMISSION STANDARD FCC PART 15 B

MP4 M/N:ID1829C Manufacturer: Natural Sound

Operating Condition: Charging Test Site: 1#Shielding Room

Operator: Bob

Test Specification: L 120V/60Hz Comment: Mains port

Report No.:ATE20122302

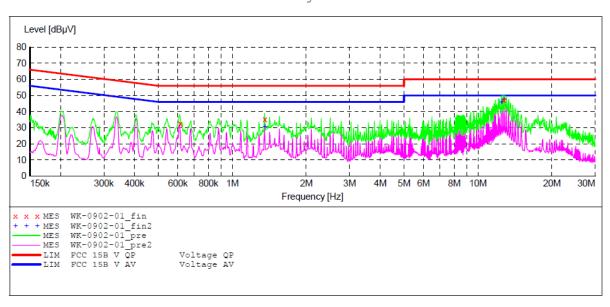
#### SCAN TABLE: "V 150K-30MHz fin"

SUB\_STD\_VTERM2 1.70 Short Description:

Detector Meas. Stop IF Start Step Transducer

Frequency Frequency 150.0 kHz 30.0 MHz Bandw. Width Time QuasiPeak 1.0 s 9 kHz NSLK8126 2008 0.8 %

Average



#### MEASUREMENT RESULT: "WK-0902-01 fin"

10/09/2012 1 Frequency MHz	Level		Limit dBµV	Margin dB	Detector	Line	PE
0.613500 1.356000 12.763500	35.30	12.0 11.8 11.2	56		ÕР	L1 L1 L1	GND GND GND

#### MEASUREMENT RESULT: "WK-0902-01 fin2"

10/09/2012 Frequency MHz	Level	Limit dBµV	Margin dB	Detector	Line	PE
1.356000 12.493500 12.768000	30.70 45.80 47.30		15.3 4.2 2.7	AV	L1 L1 L1	GND GND GND

#### CONDUCTED EMISSION STANDARD FCC PART 15 B

MP4 EUT: M/N:ID1829C Manufacturer: Natural Sound Operating Condition: Charging

Test Site: 1#Shielding Room

Operator: Bob

Test Specification: N 120V/60Hz Comment: Mains port

Report No.:ATE20122302

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

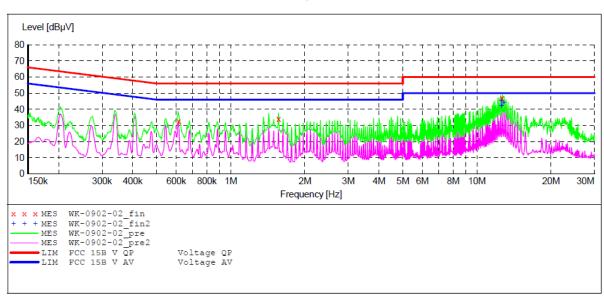
\_\_SUB\_STD\_VTERM2 1.70 Short Description:

Start Stop Step Detector Meas. IF Transducer

Frequency Frequency Width 150.0 kHz 30.0 MHz 0.8 % Time Bandw.

QuasiPeak 1.0 s 9 kHz NSLK8126 2008

Average



#### MEASUREMENT RESULT: "WK-0902-02 fin"

10	/09/2012 10	0:23AM						
	Frequency	Level	Transd	Limit	Margin	Detector	Line	PE
	MHz	dBuV	dB	dBuV	dB			
	0.613500	32.70	12.0	56	23.3	OP	N	GND
	1.563000	34.10	11.7		21.9	~		
						~	N	GND
	12.646500	47.00	11.2	60	13.0	QP	N	GND

#### MEASUREMENT RESULT: "WK-0902-02 fin2"

10/09/2012 Frequency MHz		Transd dB	Limit dBµV	Margin dB	Detector	Line	PE
12.574500	42.30	11.2	50	7.7	AV	N	GND
12.579000	45.20	11.2	50	4.8		N	GND
12.849000	44.20	11.2	50	5.8		N	GND

#### CONDUCTED EMISSION STANDARD FCC PART 15B

EUT: MP4 M/N:ID1829C Manufacturer: Natural Sound Operating Condition: Transfer data Test Site: 1#Shielding Room

Operator: Bob

Test Specification: N 120V/60Hz Mains port

Report No.:ATE20122302

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

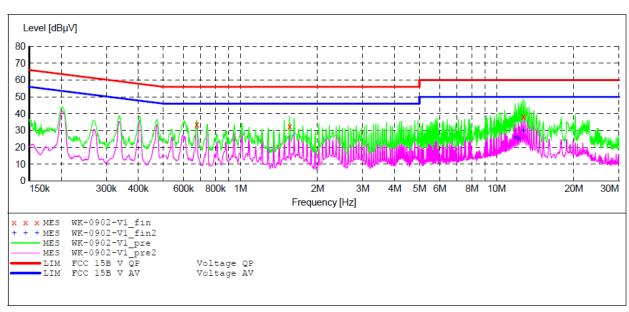
\_SUB\_STD\_VTERM2 1.70 Short Description:

Stop Step Detector Meas. ΙF Start Transducer

Width Time Bandw.

Frequency Frequency 150.0 kHz 30.0 MHz QuasiPeak 1.0 s 9 kHz NSLK8126 2008 0.8 %

Average



#### MEASUREMENT RESULT: "WK-0902-V1 fin"

10/09/2012 5 Frequency MHz	Level		Limit dBµV	Margin dB	Detector	Line	PE
0.675618 1.556134 12.705153	32.50	11.7	56	22.2 23.5 21.5	ÕР	N N N	GND GND GND

#### MEASUREMENT RESULT: "WK-0902-V1 fin2"

10	/09/2012 5:	09PM						
	Frequency	Level	Transd	Limit	Margin	Detector	Line	PΕ
	MHz	dΒμV	dB	dΒμV	dB			
	11.824236	41.80	11.2	50	8.2	AV	N	GND
	12.159314	42.00	11.2	50	8.0	AV	N	GND
	12.705153	40.90	11.2	50	9.1	AV	N	GND

#### CONDUCTED EMISSION STANDARD FCC PART 15B

EUT: MP4 M/N:ID1829C
Manufacturer: Natural Sound
Operating Condition: Transfer data
Test Site: 1#Shielding Room

Operator: Bob

Test Specification: L 120V/60Hz Comment: Mains port

Report No.:ATE20122302

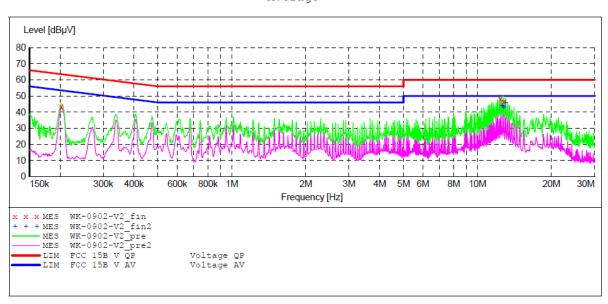
SCAN TABLE: "V 150K-30MHz fin"

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

Ãverage



#### MEASUREMENT RESULT: "WK-0902-V2 fin"

1	0/09/2012 5:	14PM						
	Frequency	Level	Transd	Limit	Margin	Detector	Line	PE
	MHz	dΒμV	dB	dΒμV	dB			
	0.202358	43.40	11.2	64	20.1	QP	L1	GND
	12.404453	47.90	11.2	60	12.1	QP	L1	GND
	12.806998	46.60	11.2		13.4	QP	L1	GND

#### MEASUREMENT RESULT: "WK-0902-V2 fin2"

10/09/2012 5:	14PM						
Frequency	Level	Transd	Limit	Margin	Detector	Line	PE
MHz	dBµV	dB	dΒμV	dB			
12.604118	43.70	11.2	50	6.3	AV	L1	GND
12.806998	43.00	11.2	50	7.0	AV	L1	GND
13.013142	45.70	11.2	50	4.3	ΔV	T.1	GND

# 6. RADIATED EMISSION FOR FCC PART 15 SECTION 15.109(A)

## 6.1.Block Diagram of Test Setup

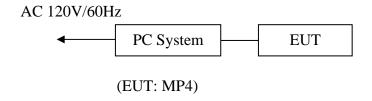
6.1.1.Block diagram of connection between the EUT and simulators

6.1.1.1. For playing & Camera playing & FM Radio

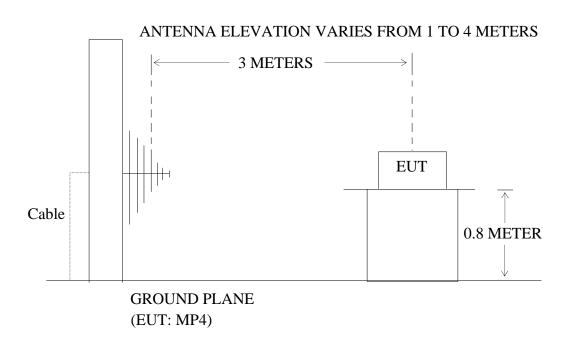


(EUT: MP4)

6.1.1.2.For Transfer data & Charging



6.1.2.Semi-Anechoic Chamber Test Setup Diagram



## 6.2. The Emission Limit For Section 15.109 (a)

6.2.1.Radiation Emission Measurement Limits According to Section 15.109 (a).

	Lir	nit
Frequency (MHz)	Field Strength of Quasi-peak Value (microvolts/m)	Field Strength of Quasi-peak Value (dBµV/m)
30 - 88	100	40
88 - 216	150	43.5
216 - 960	200	46
Above 960	500	54

## 6.3.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.

## 6.3.1.MP4 (EUT)

Model Number : ID1829C Serial Number : N/A

Manufacturer : Shenzhen Natural Sound Electronics Co., Ltd.

## 6.4. Operating Condition of EUT

- 6.4.1. Setup the EUT and simulator as shown as Section 6.1.
- 6.4.2. Turn on the power of all equipment.
- 6.4.3. Let the EUT work in (Playing, Transfer data, Camera playing, Charging, FM Radio) mode measure it.

## 6.5.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: 2009 on radiated emission measurement.

The bandwidth of test receiver is set at 120kHz in 30-1000MHz

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

# 6.6. The Emission Measurement Result PASS.

Date of Test: October 10-11, 2012 Temperature:  $25^{\circ}C$ Humidity: EUT: MP4 50% ID1829C Power Supply: DC 3.7V Model No.: Test Engineer: PEI Test Mode: Playing

Frequency: 30-1000MHz

Frequency: 30-	TOOOM	HZ						
Polarization								
	No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
Horizontal	1	216.1197	26.41	14.79	41.20	46.00	-4.80	QP
	2	322.5896	23.28	19.45	42.73	46.00	-3.27	QP
	3	389.9874	21.41	21.88	43.29	46.00	-2.71	QP
	No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
Vertical	1	216.1197	19.12	14.79	33.91	46.00	-12.09	QP
	2	285.2611	17.06	18.46	35.52	46.00	-10.48	QP
	3	322.5896	20.96	19.45	40.41	46.00	-5.59	QP

Date of Test: October 11, 2012 Temperature: 25°C

EUT: MP4 Humidity: 50%
Model No.: ID1829C Power Supply: DC 5V

Test Mode: Transfer data Test Engineer: PEI

Frequency: 30-	1000M	Hz						
Polarization								
	No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
Horizontal	1	402.5168	20.33	22.39	42.72	46.00	-3.28	QP
Horizontai	2	582.1122	17.44	25.44	42.88	46.00	-3.12	QP
	3	716.2038	15.01	27.05	42.06	46.00	-3.94	QP
	No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
Vertical	1	441.0199	16.80	22.87	39.67	46.00	-6.33	QP
, orthodi	2	511.1487	17.40	24.12	41.52	46.00	-4.48	QP
l	3	582.1122	18.52	25.44	43.96	46.00	-2.04	QP

Date of Test: October 11, 2012 Temperature: 25°C

EUT: MP4 Humidity: 50%

Model No.: ID1829C Power Supply: DC 3.7V
Test Mode: Camera playing Test Engineer: PEI

Frequency: 30-	1000M	Hz						
Polarization								
	No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
Horizontal	1	285.2611	24.34	18.46	42.80	46.00	-3.20	QP
110112011141	2	428.7960	20.19	23.01	43.20	46.00	-2.80	QP
	3	757.6201	14.82	27.72	42.54	46.00	-3.46	QP
	No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
Vertical	1	216.1197	21.92	14.79	36.71	46.00	-9.29	QP
	2	236.7928	23.29	16.80	40.09	46.00	-5.91	QP
	3	285.2611	19.57	18.46	38.03	46.00	-7.97	QP

Date of Test:October 11, 2012Temperature:25°CEUT:MP4Humidity:50%Model No.:ID1829CPower Supply:DC 5V

Test Mode: Charging Test Engineer: PEI

Frequency: 30-1	1000MI	Hz						
Polarization								
	No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
Horizontal	1	230.2295	23.52	15.88	39.40	46.00	-6.60	QP
	2	347.2921	20.34	20.49	40.83	46.00	-5.17	QP
	3	402.5168	18.49	22.39	40.88	46.00	-5.12	QP
	No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
Vertical	1	93.9829	15.09	14.05	29.14	43.50	-14.36	QP
	2	441.0199	17.11	22.87	39.98	46.00	-6.02	QP
	3	511.1487	14.53	24.12	38.65	46.00	-7.35	QP

Date of Test: October 11, 2012 Temperature: 25°C

EUT: MP4 Humidity: 50%

Model No.: ID1829C Power Supply: DC 3.7V
Test Mode: FM Radio (88.1MHz) Test Engineer: PEI

Frequency: 30-1	000MI	Hz						
Polarization								
	No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
Horizontal	1	88.1000	15.91	13.74	29.65	40.00	-10.35	QP
	2	120.6118	10.09	14.72	24.81	43.50	-18.69	QP
	3	320.3306	14.43	19.35	33.78	46.00	-12.22	QP
	No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
	1	88.1000	24.13	13.74	37.87	40.00	-2.13	QP
Vertical	2	130.7633	9.48	14.88	24.36	43.50	-19.14	QP
	3	175.6565	8.21	15.75	23.96	43.50	-19.54	QP
	4	324.8645	3.12	19.54	22.66	46.00	-23.34	QP

Date of Test: October 11, 2012 Temperature: 25°C

EUT: MP4 Humidity: 50%

ID1829C

Model No.:

Test Mode: FM Radio (98.1MHz) Test Engineer: PEI

Frequency: 30-1	1000M	Hz						
Polarization								
	No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
	1	98.1000	12.40	14.03	26.43	43.50	-17.07	QP
Horizontal	2	121.0363	8.41	14.75	23.16	43.50	-20.34	QP
	3	177.5179	7.80	15.77	23.57	43.50	-19.93	QP
	4	320.3306	14.15	19.35	33.50	46.00	-12.50	QP
	No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
	1	98.1000	24.89	13.93	38.82	43.50	-4.68	QP
Vertical	2	132.6142	11.16	14.79	25.95	43.50	-17.55	QP
	3	175.6566	13.23	15.75	28.98	43.50	-14.52	QP
	4	324.8645	8.32	19.54	27.86	46.00	-18.14	QP

Power Supply: DC 3.7V

Date of Test:October 11, 2012Temperature:25°CEUT:MP4Humidity:50%Model No.:ID1829CPower Supply:DC 3.7VTest Mode:FM Radio (107.9MHz)Test Engineer:PEI

Frequency: 30-1	1000M	Hz						
Polarization								
	No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
Horizontal	1	107.9000	12.47	13.77	26.24	43.50	-17.26	QP
	2	115.2266	8.76	14.30	23.06	43.50	-20.44	QP
	3	320.3306	13.75	19.35	33.10	46.00	-12.90	QP
	No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
	1	107.9000	21.80	14.19	35.99	43.50	-7.51	QP
Vertical	2	133.0809	12.07	14.76	26.83	43.50	-16.67	QP
	3	174.4265	10.31	15.64	25.95	43.50	-17.55	QP
	4	324.8645	9.59	19.54	29.13	46.00	-16.87	QP

Note: 1. Emissions attenuated more than 20 dB below the permissible value are not reported.

2. 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

3. The spectral diagrams are attached as below display the measurement of peak values.



F1,Bldg,A,Changyuan New Material Port Keyuan Rd, Science & Industry Park,Nanshan Shenzhen,P.R.China Site: 966 chamber Tel:+86-0755-26503290 Fax:+86-0755-26503396

Job No.: Bob #3590

Standard: FCC Class B 3M Radiated

Test item: Radiation Test

Temp.( C)/Hum.(%) 23 C / 49 %

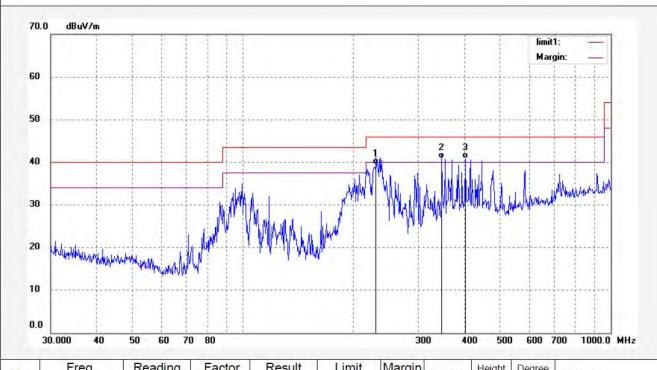
EUT: MP4 Mode: Charging Model: ID1829C

Manufacturer: Natural Sound

Note: Report NO.:ATE20122302

Polarization: Horizontal Power Source: DC 5V

Date: 12/10/13/
Time: 9/02/06
Engineer Signature:
Distance: 3m





F1,Bldg,A,Changyuan New Material Port Keyuan Rd, Science & Industry Park,Nanshan Shenzhen,P.R.China Site: 966 chamber Tel:+86-0755-26503290 Fax:+86-0755-26503396

Job No.: Bob #3591

Standard: FCC Class B 3M Radiated

Test item: Radiation Test

Temp.( C)/Hum.(%) 23 C / 49 %

EUT: MP4

Mode: Charging

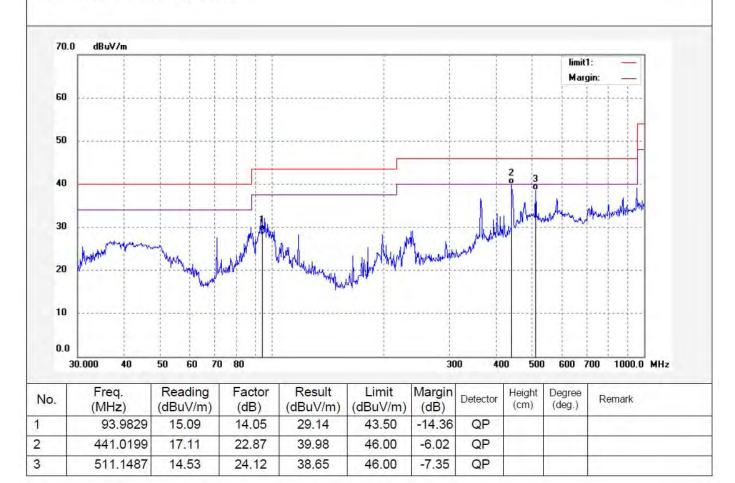
Model: ID1829C

Manufacturer: Natural Sound

Note: Report NO.:ATE20122302

Polarization: Vertical Power Source: DC 5V

Date: 12/10/13/ Time: 9/05/29 Engineer Signature: Distance: 3m





F1,Bldg,A,Changyuan New Material Port Keyuan Rd, Science & Industry Park,Nanshan Shenzhen,P.R.China Site: 966 chamber Tel:+86-0755-26503290 Fax:+86-0755-26503396

Job No.: Bob #3593

Standard: FCC Class B 3M Radiated

Test item: Radiation Test

Temp.( C)/Hum.(%) 23 C / 49 %

EUT: MP4

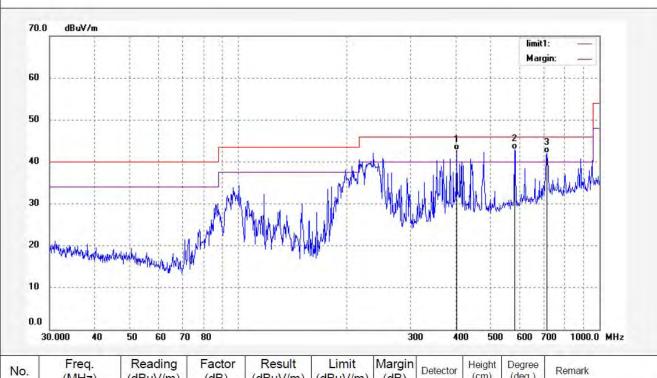
Mode: Transfer data Model: ID1829C

Manufacturer: Natural Sound

Note: Report NO.:ATE20122302

Polarization: Horizontal Power Source: DC 5V

Date: 12/10/13/ Time: 9/11/26 Engineer Signature: Distance: 3m



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark	
1	402.5168	20.33	22.39	42.72	46.00	-3.28	QP				
2	582.1122	17.44	25.44	42.88	46.00	-3.12	QP				
3	716.2038	15.01	27.05	42.06	46.00	-3.94	QP				



F1,Bldg,A,Changyuan New Material Port Keyuan Rd, Science & Industry Park,Nanshan Shenzhen,P.R.China Site: 966 chamber Tel:+86-0755-26503290 Fax:+86-0755-26503396

Job No.: Bob #3592

Standard: FCC Class B 3M Radiated

Test item: Radiation Test

Temp.( C)/Hum.(%) 23 C / 49 %

EUT: MP4

Mode: Transfer data

Model: ID1829C

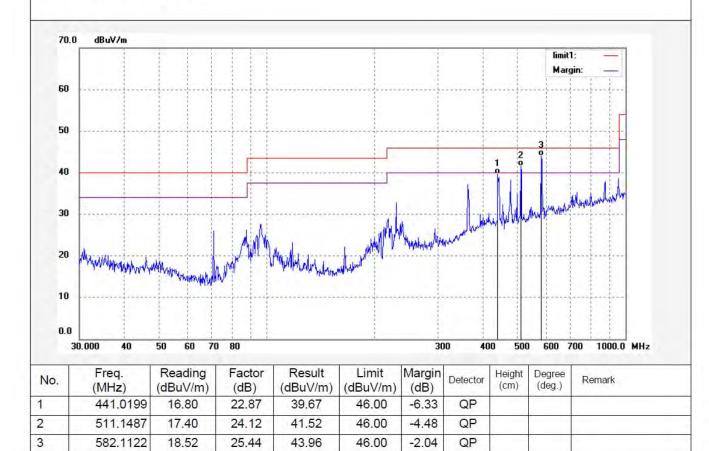
Manufacturer: Natural Sound

Note: Report NO.:ATE20122302

Polarization: Vertical

Power Source: DC 5V

Date: 12/10/13/ Time: 9/08/19 Engineer Signature:





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Job No.: Bob #3566

Standard: FCC Class B 3M Radiated

Test item: Radiation Test

Temp.( C)/Hum.(%) 23 C / 49 %

EUT: MP4
Mode: Playing
Model: ID1829C

Manufacturer: Natural Sound

Note: Report NO.:ATE20122302

Polarization: Horizontal

Power Source: DC 3.7V

Date: 12/10/11/ Time: 9/19/13 Engineer Signature:

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No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	216.1197	26.41	14.79	41.20	46.00	-4.80	QP			
2	322.5896	23.28	19.45	42.73	46.00	-3.27	QP			
3	389.9874	21.41	21.88	43.29	46.00	-2.71	QP			



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Job No.: Bob #3565

Standard: FCC Class B 3M Radiated

Test item: Radiation Test

Temp.( C)/Hum.(%) 23 C / 49 %

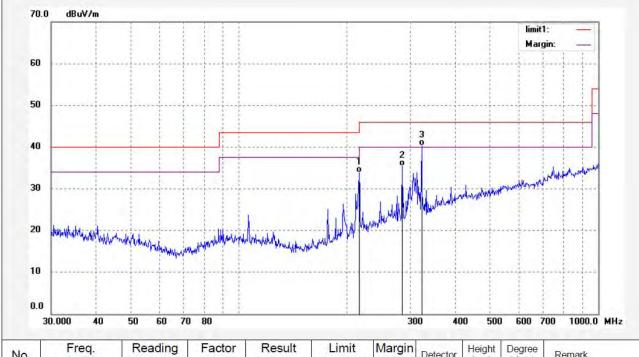
EUT: MP4
Mode: Playing
Model: ID1829C

Manufacturer: Natural Sound

Note: Report NO.:ATE20122302

Polarization: Vertical Power Source: DC 3.7V

Date: 12/10/11/
Time: 9/16/28
Engineer Signature:
Distance: 3m



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark	
1	216.1197	19.12	14.79	33.91	46.00	-12.09	QP				
2	285.2611	17.06	18.46	35.52	46.00	-10.48	QP				
3	322.5896	20.96	19.45	40.41	46.00	-5.59	QP				



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Job No.: Bob #3568

Standard: FCC Class B 3M Radiated

Test item: Radiation Test

Temp.( C)/Hum.(%) 23 C / 49 %

EUT: MP4
Mode: Camera
Model: ID1829C

Manufacturer: Natural Sound

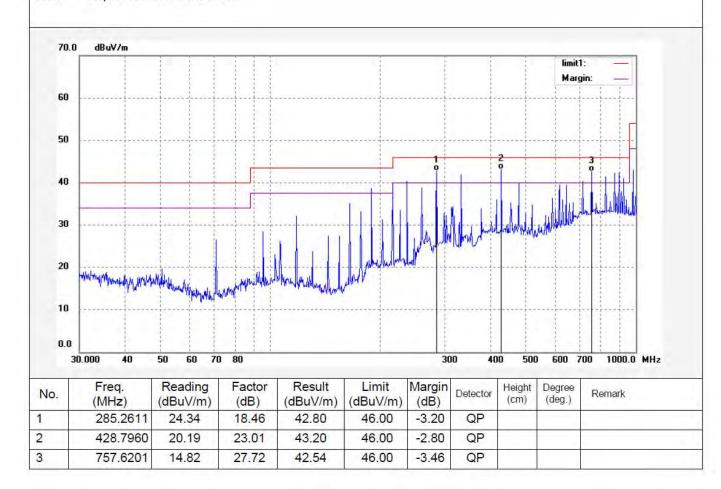
Note: Report NO.:ATE20122302

Polarization: Horizontal

Power Source: DC 3.7V Date: 12/10/11/

Engineer Signature: Distance: 3m

Time: 9/21/57





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Job No.: Bob #3569

Standard: FCC Class B 3M Radiated

Test item: Radiation Test

Temp.( C)/Hum.(%) 23 C / 49 %

EUT: MP4 Mode: Camera Model: ID1829C

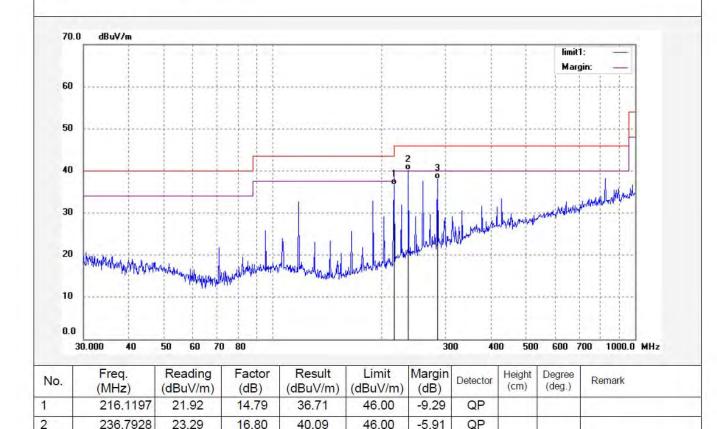
Manufacturer: Natural Sound

Note: Report NO.:ATE20122302

Polarization: Vertical

Power Source: DC 3.7V Date: 12/10/11/ Time: 9/23/08

Engineer Signature: Distance: 3m



3

285.2611

19.57

18.46

38.03

46.00

-7.97

QP



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Job No.: Bob #1782

Standard: FCC Class B 3M Radiated

Test item: Radiation Test

Temp.( C)/Hum.(%) 24 C / 48 %

EUT: MP4

Note:

Mode: FM 88.1MHz Model: ID1829C

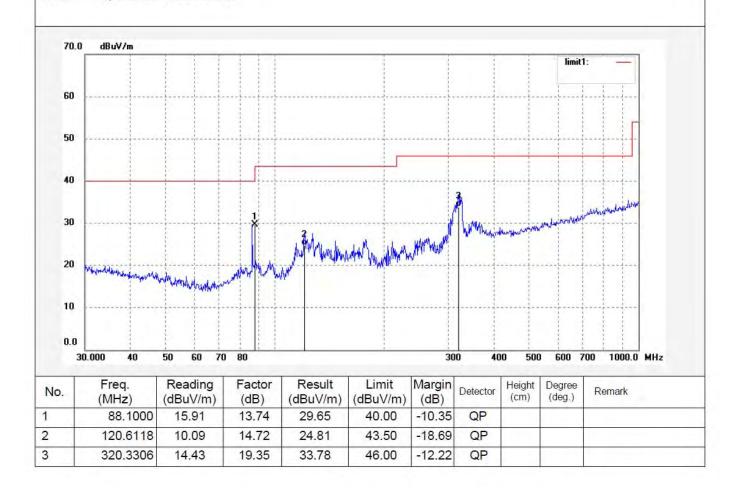
Manufacturer: Natural Sound

Report No.:ATE20122302

Polarization: Horizontal Power Source: DC 3.7V

Date: 12/10/10/ Time: 18:37:18

Engineer Signature: Bob





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Job No.: Bob #1781

Standard: FCC Class B 3M Radiated

Test item: Radiation Test

Temp.( C)/Hum.(%) 24 C / 48 %

EUT: MP4

Mode: FM 88.1MHz Model: ID1829C

Manufacturer: Natural Sound

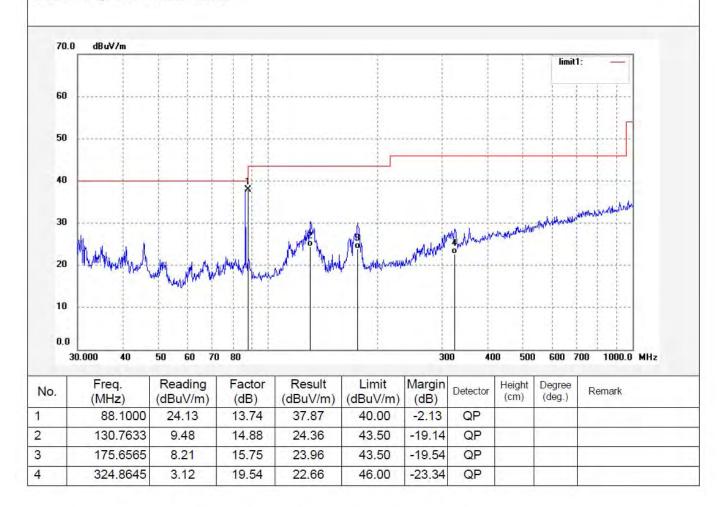
Note: Report No.:ATE20122302

Polarization: Vertical

Power Source: DC 3.7V

Date: 12/10/10/ Time: 18:35:06

Engineer Signature: Bob





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Site: 966 chamber Tel:+86-0755-26503290 Fax:+86-0755-26503396

Job No.: Bob #1783

Standard: FCC Class B 3M Radiated

Test item: Radiation Test

Temp.( C)/Hum.(%) 24 C / 48 %

EUT: MP4

Mode: FM 98.1MHz

Model: ID1829C

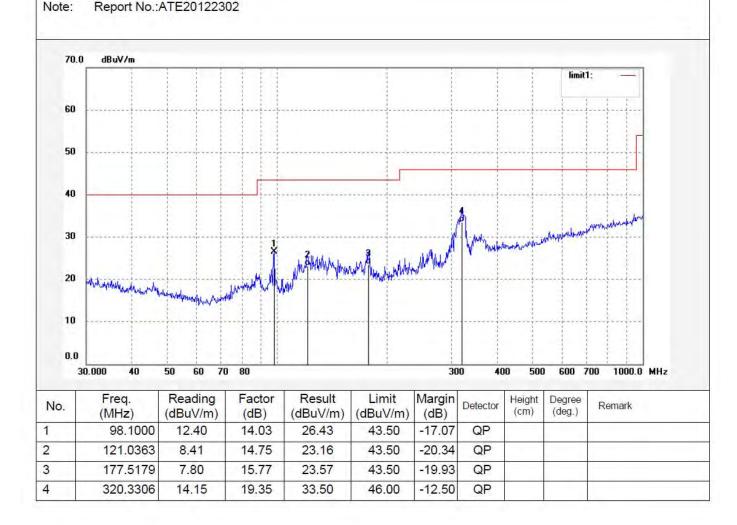
Manufacturer: Natural Sound

Polarization: Horizontal

Power Source: DC 3.7V Date: 12/10/10/

Time: 18:42:14

Engineer Signature: Bob





F1,Bldg,A,Changyuan New Material Port Keyuan Rd, Science & Industry Park,Nanshan Shenzhen,P.R.China Site: 966 chamber Tel:+86-0755-26503290 Fax:+86-0755-26503396

Job No.: Bob #1784

Standard: FCC Class B 3M Radiated

Test item: Radiation Test

Temp.( C)/Hum.(%) 24 C / 48 %

EUT: MP4

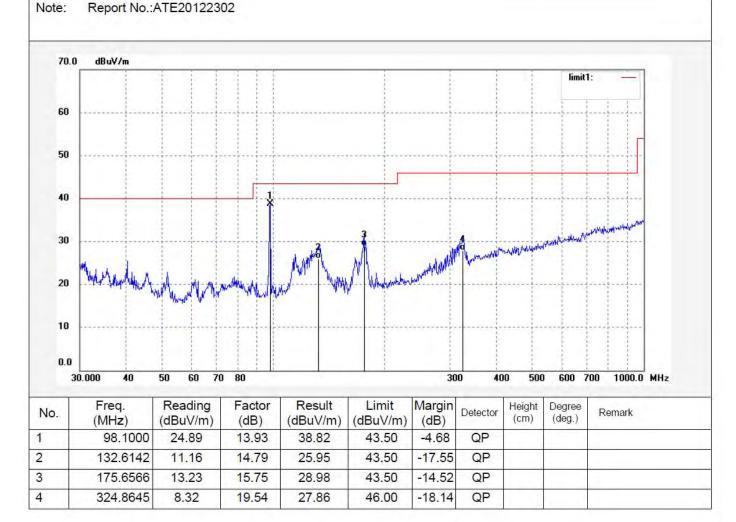
Mode: FM 98.1MHz Model: ID1829C

Manufacturer: Natural Sound

Polarization: Vertical Power Source: DC 3.7V

Date: 12/10/10/ Time: 18:44:25

Engineer Signature: Bob





F1,Bldg,A,Changyuan New Material Port Keyuan Rd, Science & Industry Park,Nanshan Shenzhen,P.R.China Site: 966 chamber Tel:+86-0755-26503290 Fax:+86-0755-26503396

Job No.: Bob #1786

Standard: FCC Class B 3M Radiated

Test item: Radiation Test

Temp.( C)/Hum.(%) 24 C / 48 %

EUT: MP4

Mode: FM 107.9MHz Model: ID1829C

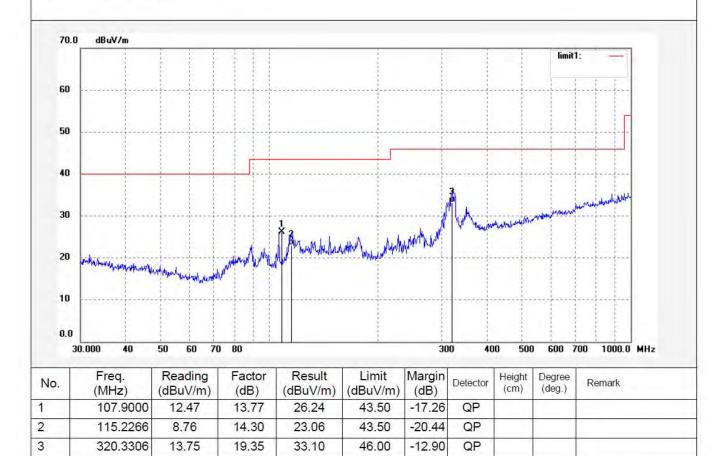
Manufacturer: Natural Sound

Note: Report No.:ATE20122302

Polarization: Horizontal Power Source: DC 3.7V

Date: 12/10/10/ Time: 18:50:28

Engineer Signature: Bob





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Site: 966 chamber Tel:+86-0755-26503290 Fax:+86-0755-26503396

Job No.: Bob #1785

Standard: FCC Class B 3M Radiated

Test item: Radiation Test

Temp.( C)/Hum.(%) 24 C / 48 %

EUT: MP4

Mode: FM 107.9MHz Model: ID1829C

Manufacturer: Natural Sound

Polarization: Vertical Power Source: DC 3.7V

Date: 12/10/10/ Time: 18:47:32

Engineer Signature: Bob

