

# **FCC TEST REPORT**

## **for**

### **Electronic Anti-lost alarm**

Model No. : G0408

FCC ID : WAVG0408

Operating Frequency : 433.88MHz

Applicant : KANGGU MEDICAL EQUIPMENT FACTORY  
NO.380 NINGKANG EAST ROAD, YUEQING, ZHEJING, CHINA

Regulation : ***FCC Part 15.231 Subpart C***

Prepared by : AOV Testing Technology Co., Ltd  
AOV Building, Xueyuan Road East, University City, Shenzhen  
(Tanglang Village, Xili Town, Nanshan District), China

Test Date : May 10-20, 2008

Date of Report : May 20, 2008

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## TEST REPORT DECLARATION

Applicant : KANGGU MEDICAL EQUIPMENT FACTORY  
Manufacturer : KANGGU MEDICAL EQUIPMENT FACTORY  
EUT Description : Electronic Anti-lost alarm

**Test Procedure Used:**  
**FCC Part 15.231 Subpart C**

The E. U. T. listed below has been completed RFI testing by Shenzhen AOV Testing Technology Co., Ltd at the test site of World Standardization Certification & Testing Co., Ltd. And the Interference emissions can pass **FCC CLASS B** limitations.

The test configurations and the facility comply with the radiated and AC line conducted test site criteria in **ANSI C63.4-2003**.

Date of Test:

May 10-20, 2008

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Prepared by:



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Project Engineer

Reviewer :



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Project Manager

## 1. GENERAL INFORMATION

### 1.1 General Information

Applicant : KANGGU MEDICAL EQUIPMENT FACTORY  
NO.380 NINGKANG EAST ROAD, YUEQING,  
ZHEJING, CHINA

Manufacturer : KANGGU MEDICAL EQUIPMENT FACTORY  
NO.380 NINGKANG EAST ROAD, YUEQING,  
ZHEJING, CHINA

### 1.2 Test Facility

Test Firm : World Standardization Certification & Testing Co., Ltd  
Certificated by FCC, Registration no.: 276008  
Address : 1-2/F, Dachong Keji Building No.28 Of Tonggu Road,  
Nanshan District, Shenzhen, PRC  
Tel : 86-755-26990810  
Fax : 86-755-26996253

## 1.3 Test Instrument Used

Test Instrment					
EQUIPMENT TYPE	MFR	MODEL NUMBER	SERIAL NUMBER	LAST CAL	CAL DUE
EMI Test Receiver	R&S	ESCI	100005	03/16/2008	03/15/2009
EMI Test Receiver	R&S	FSU	100005	03/16/2008	03/15/2009
Amplifier	HP	HP8447E	2945A02715	03/16/2008	03/15/2009
Log Antenna	Sunol Sciences Corporation	JB3	A021907	03/12/2008	03/11/2009
Horn Antenna	Sunol Sciences Corporation	JB1	A040904-1	03/12/2008	03/11/2009
Cable	TIME MICROWAVE	LMR-400	N-TYPE04	03/16/2008	03/15/2009
System-Controller	CC-C-1F	MF7802080	N/A	N/A	N/A
Turn Table	EMCO	1-1.21	N/A	N/A	N/A
Antenna Tower	CT	N/A	N/A	N/A	N/A
Decoupling Network	FISCHER CUSTOM	201-DCN-5-6 MM	12	03/6/2008	03/15/2009
Oscilloscope	TEK	TDS1012B	10002B	03/16/2008	03/15/2009

## 2. RADIATION INTERFERENCE

### 2.1.Rules Part No.

15.231

### 2.2.Limits

Fundamental (MHz)	Field Strength of Frequency Fundamental (microvolts/meter)	Field Strength of Spurious Emission (microvolts/meter)
40.66 - 40.70	1,000 (60)	100 (40)
70 - 130	500 (53.98)	50 (33.98)
130 - 174	500 to 1,500 ** (53.98 to 63.52)	50 to 150 ** (33.98 to 43.52)
174 - 260	1,500(63.52)	150 (43.52)
260 - 470	1,500 to 5,000 ** (63.52 to 73.98)	150 to 500 ** (43.52 to 53.98)
Above 470	5,000 (73.98)	500 (53.98)

\*\* linear interpolations

### 2.3.Test Procedure

#### **ANSI STANDARD C63.4-2003 10.1.7 MEASUREMENT PROCEDURES:**

The UUT is placed on a turned table that is 0.8 meter above the ground. The turned table can rotate 360 degrees to determine the position of the maximum emission level. The UUT is set 3 meters away from the receiving antenna that is mounted on the antenna tower. The antenna can move up and down between 1 meter and 4 meters to find out the maximum emission level. Broadband antenna (log periodical antenna and horn antenna) is used as receiving antenna. Both horizontal and vertical polarization of the antenna is set on test.

The resolution bandwidth was 100 kHz and the video bandwidth was 300 kHz.

The spectrum was scanned from 30 MHz to 10th harmonic of the fundamental.

### 2.4.Test Result

**PASS**

Detailed information, Please refer to the following page.

**Horizontal:**

Frequency (MHz)	PK (dBuV/m)	Read Level (dBuV/m)	Limit (dBuV/m)	Margin (dBuV/m)
433.8665	79.89	58.20	72.86	14.66
869.5391	59.30	48.30	53.98	5.68
1301.2321	60.31	45.20	53.98	8.78
1730.6913	55.67	39.80	53.98	14.18
2166.6666	57.32	37.02	53.98	16.96
2602.5600	49.28	35.72	53.98	18.26
3033.4000	35.02	20.80	53.98	33.18

**Vertical:**

Frequency (MHz)	PK (dBuV/m)	Read Level (dBuV/m)	Limit (dBuV/m)	Margin (dBuV/m)
433.8665	81.89	62.40	72.86	10.46
869.5391	62.30	47.28	53.98	6.70
1301.2321	55.48	44.98	53.98	9.00
1730.6913	50.29	45.60	53.98	8.38
2166.6666	55.79	44.06	53.98	9.92
2602.5600	53.69	29.20	53.98	24.78
3033.4000	34.88	21.20	53.98	32.78

\* The read level was the last result which be accounted with all factors by system automatic.

For the band 260-470 MHz, Limit =  $16.6667 \times 433.8665 - 2833.3333 = 4397.7895$   
 $20\log(4397.7895) = 72.86$

The spectrum was scanned from 30 MHz to 4338.8 MHz, all the others of the spectrum were at least 15 dB below limit.

### 3. TRANSMITTED AND SILENT TIME

#### 3.1. Test Standard

15.231 (e)

#### 3.2. Limits

Devices operated under the provisions of this paragraph shall be provided with a means for automatically limiting operation so that the duration of each transmission shall not be greater than one second and the silent period between transmissions shall be at least 30 times the duration of the transmission but in no case less than 10 seconds.

#### 3.3. Test Procedure

The period of the pulse train is determined by observing it on an oscilloscope, record the UUT's transmitted signal with the probe connect to the antenna of the UUT

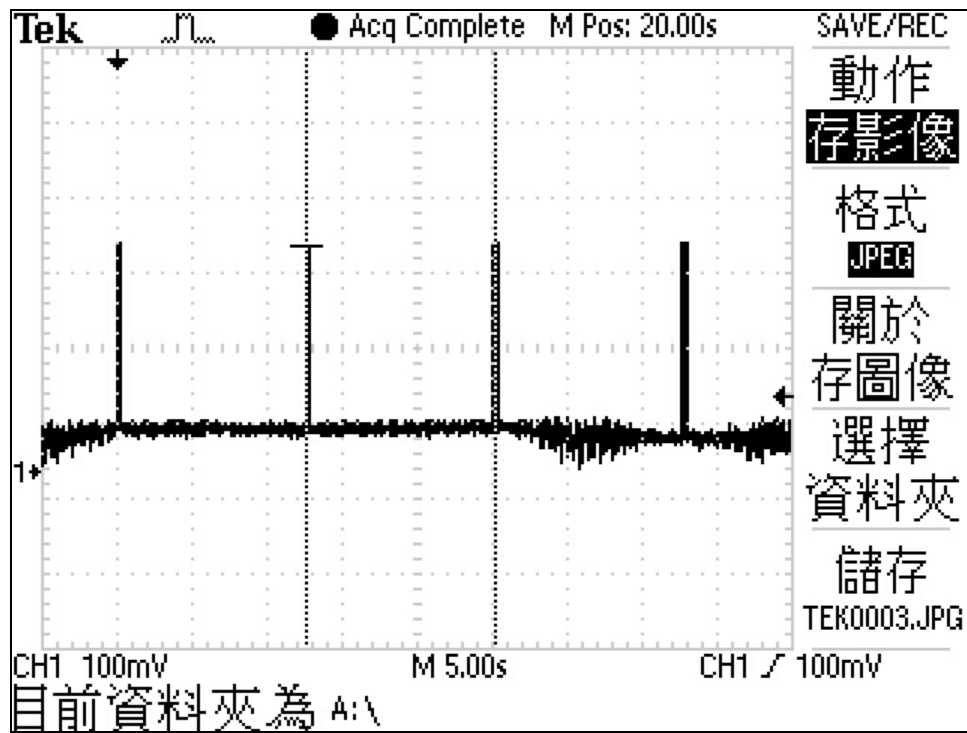
#### 3.4. Test Result

**PASS**

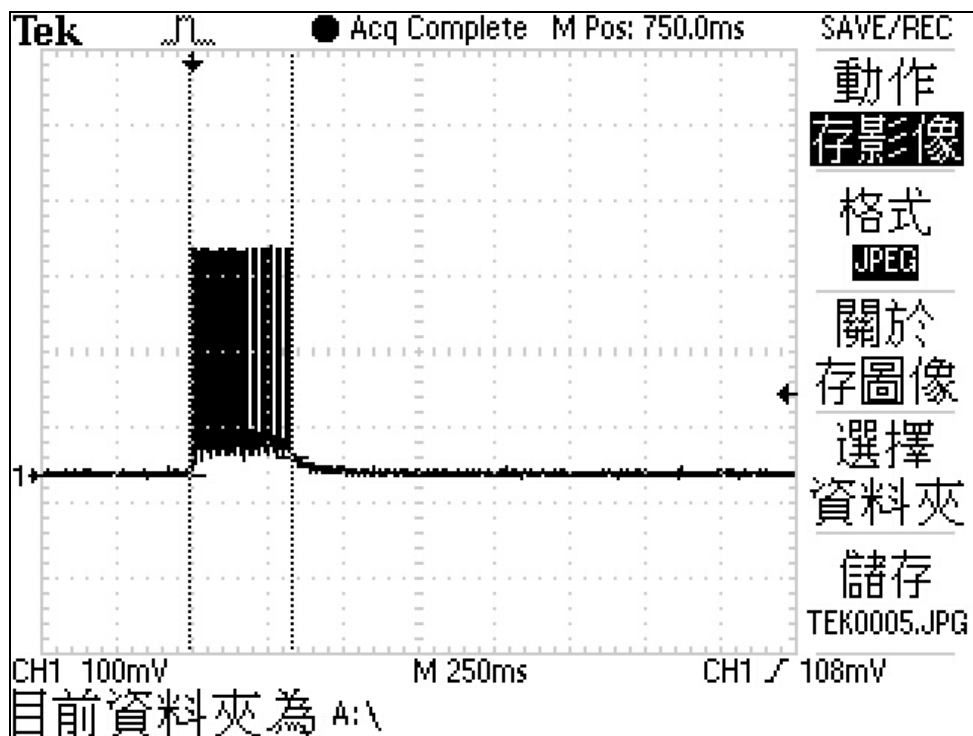
Detailed information, Please refer to the following page.



Silent Time:

 $\Delta t = 12.60s$ 

Transmitted Time:

 $\Delta t = 330ms$

## 4. BANDWIDTH

### 4.1. Test Standard

15.231(c)

### 4.2. Limits

The bandwidth of the emission shall be no wider than 0.25% of the center frequency for devices operating above 70 MHz and below 900 MHz. Bandwidth is determined at the points 20 dB down from the modulated carrier.

### 4.3. Test Procedure

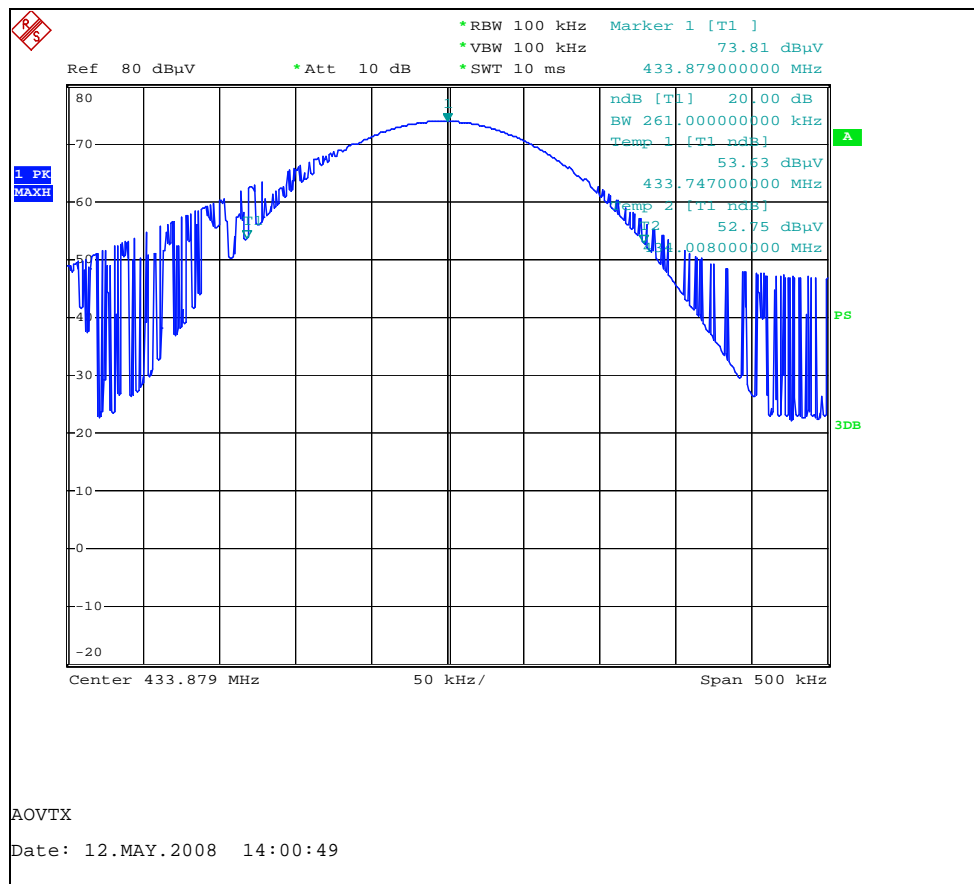
Record the response of frequency waveform when the UUT was working by a spectrum analyzer or EMI Receiver.

The vertical scale is set to 10 dB per division: the horizontal scale is set to 50 kHz per division.

### 4.4. Test Result

**PASS**

Detailed information, Please refer to the following page.



$$BW=434.008-433.74=261 \text{ kHz}$$

## 5. PHOTOGRAPH OF TEST

(Below 1 GHz)



(Above 1GHz)

