

Class B Certification Application

Under Part 15, Subpart C

EUT: WIRELESS MUSICAL SUPER-HOOP

MODEL: HAPPY-YUYU

FCC ID: OZYSUPER-HOOP

SRT REPORT # FID1D006

PREPARED FOR :

ADVOCATED ACCOMPANIMENT TECHNOLOGY CO., LTD.

106, 8F-6, NO. 76, SEC. 1, FU-SHIN. S. RD.,

TAIPEI, TAIWAN, R.O.C.

ADVOCATED ACCOMPANIMENT TECHNOLOGY CO., LTD
106, 8F-6, No.76, Sec. 1, Fu-Shin. S. Rd.
Taipei, Taiwan, R.O.C.
TEL : 886-2-27111627 FAX : 886-2-27111625

Federal Communications Commission
Authorization and Evaluation Division
7435 Oakland Mills Road
Columbia, MD 21046

To whom it may concern :

This is to serve as proper written authorization that Spectrum Research and Testing Laboratory, Inc., 15200, Shady Grove Rd., Rockville, MD. 20850, will act as our representative in all matters relating to FCC applications for equipment approval. This includes the signing of all related documents, the transmitting of required fees, and receiving correspondence and notifications from the FCC. All acts performed by Spectrum Research and Testing Laboratory, Inc., especially modifications to our equipment under testing will be carried out on our behalf.

Meantime, the applicant certifies that in the case of an individual applicant (e.g., corporation), no party to the applicant is subject to a denial of federal benefits, that includes FCC denial of federal benefits, that includes FCC benefits, pursuant to Section 5301 of the Anti-Drug Abuse Act of 1998,21 U.S.C. 862. For a definition of a " party " for these purposes see 47 C.F.R. 1.2002 (b).

If you have any questions regarding our applications for equipment approval, please contact Spectrum Research and Testing Laboratory, Inc. by calling (301) 670-2818.

Respectfully,

DON CHANG JI
(Name, Surname)

Effective Dates :

From 4/4/2001 to 4/4/2002

G. M.
(Position/Title)

DATE : 4/4/2001

EMI TESTING REPORT

EUT : WIRELESS MUSICAL SUPER-HOOP

MODEL : HAPPY-YUYU

FCC ID : OZYSUPER-HOOP

PREPARED FOR :

ADVOCATED ACCOMPANIMENT TECHNOLOGY CO., LTD.

106, 8F-6, NO. 76, SEC. 1, FU-SHIN. S. RD.,

TAIPEI, TAIWAN, R.O.C.

PREPARED BY :

SPECTRUM RESEARCH & TESTING LABORATORY INC.

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1. TEST REPORT CERTIFICATION

APPLICANT : ADVOCATED ACCOMPANIMENT TECHNOLOGY CO., LTD.

ADDRESS : 106, 8F-6, NO. 76, SEC. 1, FU-SHIN. S. RD.,
TAIPEI, TAIWAN, R.O.C.

EUT DESCRIPTION : WIRELESS MUSICAL SUPER-HOOP

(A) POWER SUPPLY : FROM BATTERY

(B) MODEL : HAPPY-YUYU

(C) FCC ID : OZYSUPER-HOOP

FINAL TEST DATE : 04/18/2001

MEASUREMENT PROCEDURE USED :

* PART 15 SUBPART C OF FCC RULES AND REGULATIONS (47 CFR PART 15)

* ANSI C63.4 - 1992

* TEST PROCEDURE AND DATA ARE TRACEABLE TO NATIONAL OR INTERNATIONAL STANDARDS.

We hereby certify that :

The measurements contained in this report were made in accordance with the procedures indicated, and the energy emitted by the equipment was found to be within the limits applicable.

TESTING ENGINEER : _____ DATE _____

Roger Su

SUPERVISOR : _____ DATE _____

Sunyou Chen

APPROVED BY : _____ DATE _____

Johnson Ho

2. TEST STATEMENT

2.1 TEST STATEMENT

1. This letter is to explain the test condition of this project. The EUT be tested as the following status.
2. The data was shown in this report reflects the worst - case data for the condition as listed above. Please disregard any other processor (s) speed shown in this user manual.
3. EUT conditions:

Operating frequency : 315MHz

- (1). The EUT is a exercise ring. It has one sensor on the ring, when we use on our waist, the EUT will transmit a 315MHz signal. For testing reason, we fixed the sensor, then the EUT can always transmit 315MHz signal.
- (2). The receiver already be tested too. It can meet digital device Class B limits. We used DoC report for applicant Advocated Accompaniment Technology Co., Ltd.

4. NVLAP logo is to be approved by management (it is according to NVLAP requirement if it need) before use.

2.2 DEPARTURE FROM DOCUMENT POLICIES, PROCEDURE OR SPECIFICATIONS , THE STATEMNT

A . Did have

Any departure from document policies & procedures or from specifications.

Yes _____, No _____.
If yes , the description as below.

B . The certificate and report shall not be reproduced except in full , without the written approval of SRT laboratory.

C . The report must not be used by the client to claim product endorsement by NVLAP or any agency the government.

D. This product is a prototype product.

E. The effect that the results relate only to the items tested.

3. EUT MODIFICATIONS

The following accessories were added to the EUT during testing :

- 1). Replaced the R1 instead of 220KΩ.

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Federal Communications Commission
Authorization and Evaluation Division
7435 Oakland Mills Road
Columbia, MD 21046

To whom it may concern :

This is to serve as proper notice that our company agrees to make
all modifications to FCC ID : OZYSUPER-HOOP as listed in section
3.0 of modification to submitted by Spectrum Research and Testing
Laboratory, Inc.

Respectfully,

DONG CHANG JWL
(Name, Surname)
G. M.
(Position/Title)

Effective Dates :

From 4/4/2001 to 4/4/2002

DATE : 4/4/2001

4. RADIATED EMISSION TEST

4.1 TEST EQUIPMENT

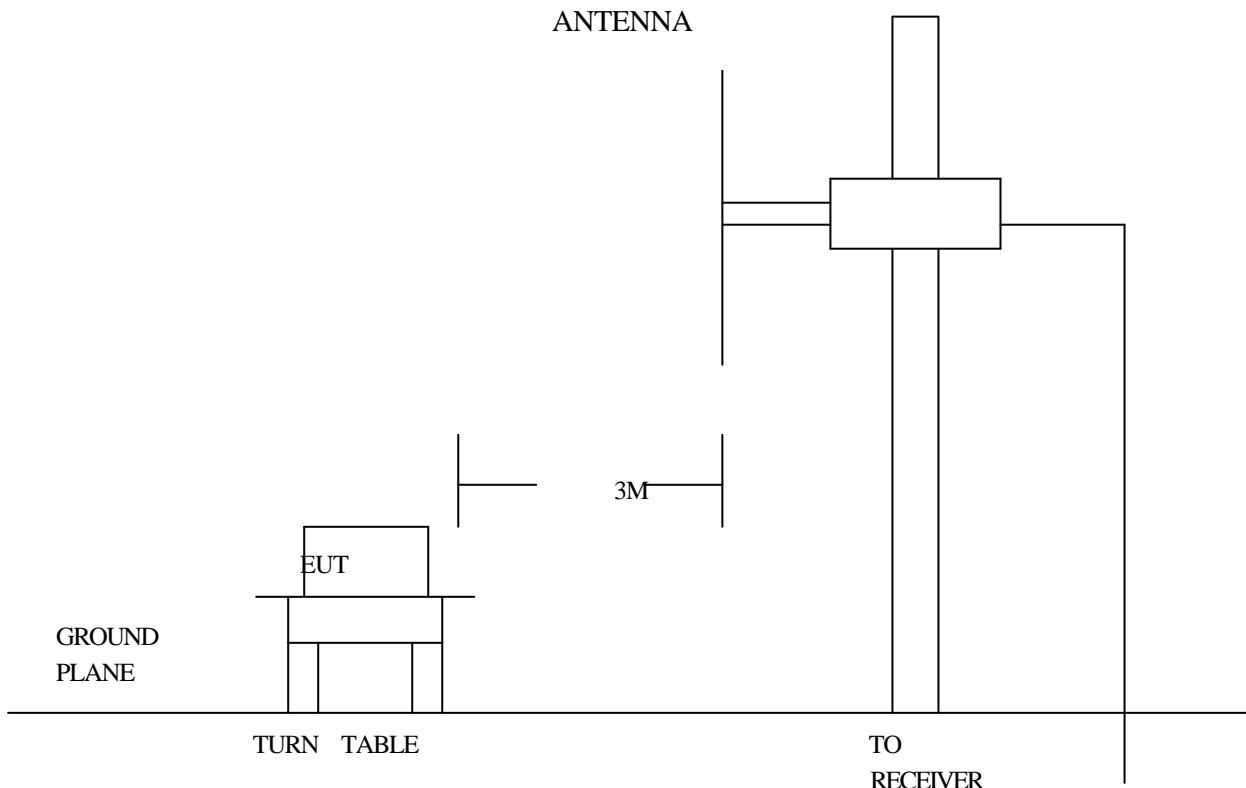
The following test equipment were used during the radiated emission test :

EQIPMENT / FACILITIES	SPECIFICA-TIONS	MANUFACTUR - ER	MODEL # / SERIAL #	DATE OF CAL. & CAL. CENTER	DUe DATE	FINAL TEST
TEST RECEIVER	9 KHz TO 2.75 MHz	R & S	ESCS30/ 830245/012	JULY 2000 ETC	1Y	
TEST RECEIVER	20 MHz TO 1000 MHz	R & S	ESVS30/ 841977/003	JULY 2000 ETC	1Y	✓
SPECTRUM ANALYZER	100 Hz TO 1500 MHz	HP	8568B/ 3001A04931	AUG. 2000 ETC	1Y	
SPECTRUM ANALYZER	9 KHz TO 22 GHz	HP	8593E/ 3322A00670	MARCH 2001 ETC	1Y	
SIGNAL GENERATOR	9 KHz TO 1080 MHz	ROHDE & SCHWARZ	SMY01/ 841104/019	MARCH 2001 ETC	1Y	✓
DIPOLE ANTENNA	28 MHz TO 1000 MHz	EMCO	3121C/ 9003-534	FEB. 2001 SRT	1Y	
DIPOLE ANTENNA	28 MHz TO 1000 MHz	EMCO	3121C/ 9611-1239	FEB. 2001 SRT	1Y	
BI-LOG ANTENNA	26 MHz TO 2000 MHz	EMCO	3142/ 9701-1124	NOV. 2000 SRT	1Y	✓
BI-LOG ANTENNA	26 MHz TO 2000 MHz	EMCO	3142/ 9608-1073	SET. 2000 SRT	1Y	
BI-LOG ANTENNA	26 MHz TO 1100 MHz	EMCO	3143/ 9509-1152	AUG. 2000 SRT	1Y	
PRE-AMPLIFIER	0.1 MHz TO 1300 MHz	HP	8447D/ 2944A08402	MARCH 2001 SRT	1Y	
PRE-AMPLIFIER	0.1 MHz TO 1300 MHz	HP	8447D/ 2944A06412	AUG. 2000 ETC	1Y	
HORN ANTENNA	1 GHz TO 18 GHz	EMCO	3115/ 9012-3619	JAN. 2001 ETC	1Y	

4 . 2 TEST PROCEDURE

- (1).The EUT was tested according to ANSI C63.4 - 1992. The radiated test was performed at SRT lab's open site. this site is on file with the FCC laboratory division, reference 31040/SIT.
- (2).The EUT, peripherals were put on the turntable which table size is 1m x 1.5 m, table high 0.8 m. All set up is according to ANSI C63.4-1992.
- (3).The frequency spectrum from 30 MHz to 3.15 GHz was investigated. All readings from 30 MHz to 1 GHz are quasi-peak values with a resolution bandwidth of 120 KHz. All readings are above 1 GHz , peak values with a resolution bandwidth of 1 MHz . Measurements were made at 3 meters.
- (4). The antenna high were varied from 1 m to 4 m high to find the maximum emission for each frequency.
- (5). The antenna polarization : Vertical polarization and horizontal polarization.

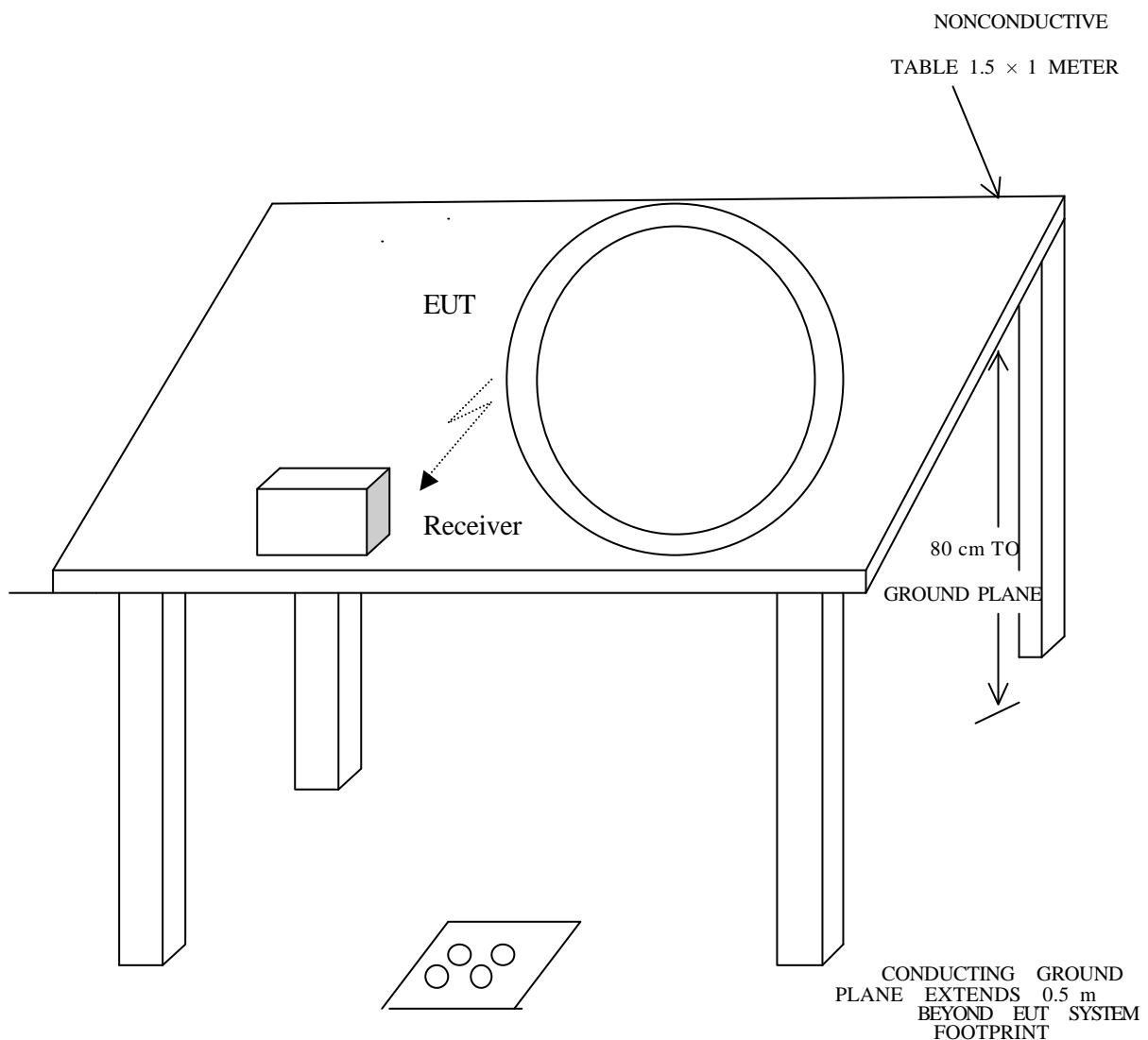
4 . 3 RADIATED TEST SET-UP



4 . 3 RADIATED TEST SET-UP

ANSI C63.4-1992

ELECTRICAL AND ELECTRONIC EQUIPMENT IN THE RANGE IN THE RANGE OF 9 KHz TO 40 GHZ



4 . 4 CONFIGURATION OF THE EUT

The EUT was configured according to ANSI C63.4 - 1992. All interface ports were connected to the appropriate peripherals. All peripherals and cables are listed below.

A. EUT

DEVICE	MANUFACTURER	MODEL #	FCCID
WIRELESS MUSICAL SUPER-HOOP	ADVOCATED ACCOMPANIMENT TECHNOLOGY CO., LTD.	HAPPY-YUYU	OZYSUPER-HOOP

B. INTERNAL DEVICES

DEVICE	MANUFACTURER	MODEL #	FCCID / DoC
N/A			

C. PERIPHERALS

DEVICE	MANUFAC-TURER	MODEL # SERIAL #	FCCID/DoC	CABLE
RECEIVER	AAT	HYY-2000R	DoC	N/A

- **REMARK :**

- (1). Cable - S1 : Single point shielding
S2 : 360° shielding
S3 : Double point shielding
- (2). Cables - all 1m or greater in length – bundled according to ANSI C63.4 – 1992.

4 . 5 EUT OPERATING CONDITION

Operating condition is according to ANSI C63.4 - 1992.

1. EUT power on.
2. Operation frequency : 315MHz

4 . 6 RADIATED EMISSION LIMITS

All emission from a digital device, including any network of conductors and apparatus connected thereto, shall not exceed the level of field strength specified below :

CLASS B

FREQUENCY (MHz)	DISTANCE (m)	FIELD STRENGTH (dBuV/m)
30 - 88	3	40.0
88 - 216	3	43.5
216 - 960	3	46.0
ABOVE 960	3	54.0

FEDERAL COMMUNICATIONS COMMISSION

§15.231 PERIODIC OPERATION IN THE BAND 40.66-40.70MHz AND ABOVE

70MHz

FUNDAMENTAL FREQUENCY (MHz)	FIELD STRENGTH OF FUNDAMENTAL (MICROVOLTS/METER)	FIELD STRENGTH OF SOUNOUS EMISSION (MICROVOLTS/METER)
40.66 - 40.70	1000	100
70 - 130	500	50
130 - 174	500 to 1500	50 to 150
174 - 260	1500	150
260 - 470	1500 to 5000	150 to 500
ABOVE 470	5000	500

NOTE :

1. In the emission tables above, the tighten limit applies at the band edges.
2. Distance refers to the distance between measuring instrument, antenna, and the closest point of any part of the device or system.

4 . 7 RADIATED EMISSION TEST RESULTS

The frequency spectrum from 30 MHz to 3.15 GHz was investigated. All readings from 30 MHz to 1 GHz are quasi-peak values with a resolution bandwidth of 120 KHz. Measurements were made at 3 meters. The measurements above 1 GHz with a resolution bandwidth of 1 MHz are peak reading at a distance of 3 meters.

Temperature : 23 °CHumidity : 60 %RH

FREQ. (MHz)	FACTOR (dB)	ANT. FACTOR (dB/m)	READING (dBuV)		EMISSION (dBuV/m)		LIMITS (dBuV/m)
			HORIZ	VERT	HORIZ	VERT	
79.3487	1.1	8.0	9.7	*	18.8	*	40.0
192.5646	1.8	11.0	*	10.6	*	23.4	43.5
315.0431	2.4	14.8	44.3	45.1	61.5	62.3	66.0
467.7856	2.8	16.9	8.1	8.5	27.5	28.2	46.0
559.6578	3.1	18.9	*	10.7	*	32.7	46.0
631.2811	3.4	20.1	21.2	20.9	44.7	44.4	46.0
776.7645	3.9	22.2	8.9	*	35.0	*	46.0
957.7742	4.4	23.8	12.7	12.3	40.9	40.5	46.0
1260.0000	3.3	25.3	*	*	*	*	46.0
1575.0000	3.8	26.4	*	*	*	*	46.0
1890.0000	4.0	28.2	*	*	*	*	46.0

REMARKS : (1) . * = Measurement does not apply for this frequency.
 (2). Uncertainty in radiated emission measured is <+/-4dB
 (3). Any departure from specification : N/A
 (4). Factor will include cable loss and correction factor.
 (5). Sample calculation

$$20 \log (\text{emission}) \mu\text{V/m} = \text{Factor(dB)} + \text{Ant. factor(dB/m)} + \text{reading(dBuV)}$$

 (6). Operation frequency : 315MHz

SIGNED BY TESTING ENGINEER : _____

5. BANDWIDTH

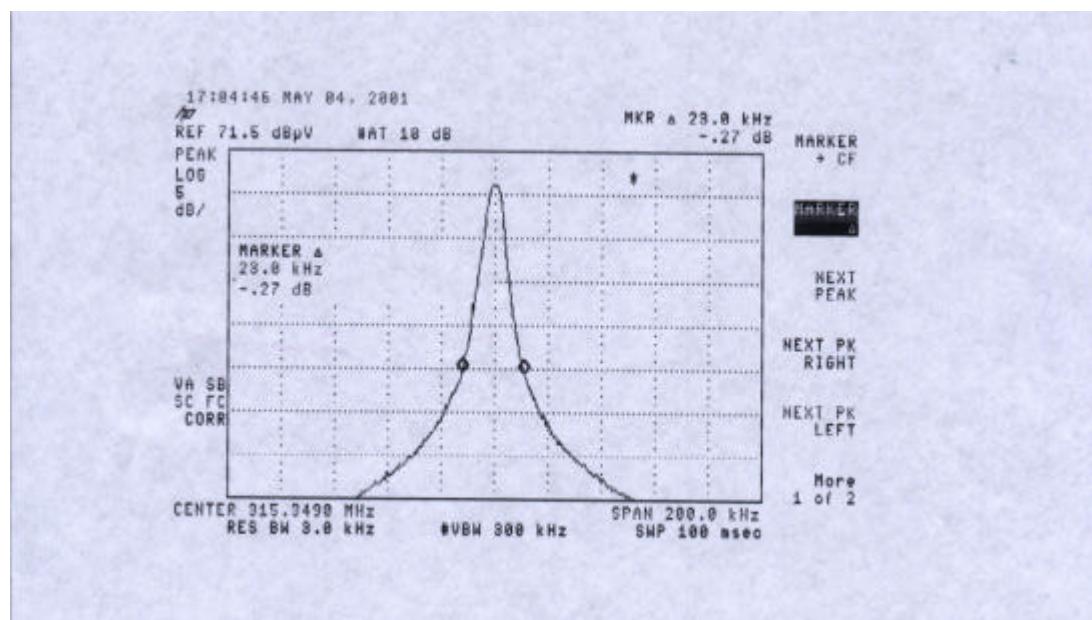
5 . 1 Limit

Operation frequency = 315MHz

Maximum 20dB bandwidth = 23.0KHz

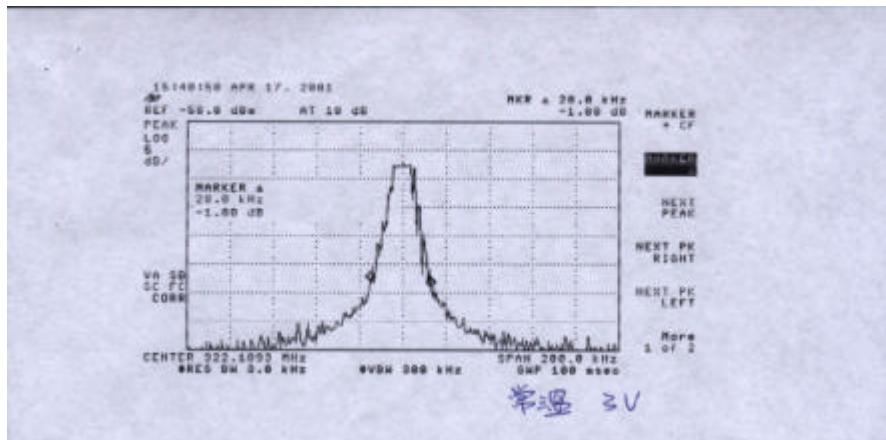
5 . 2 Test Results

Please see attached plotter.

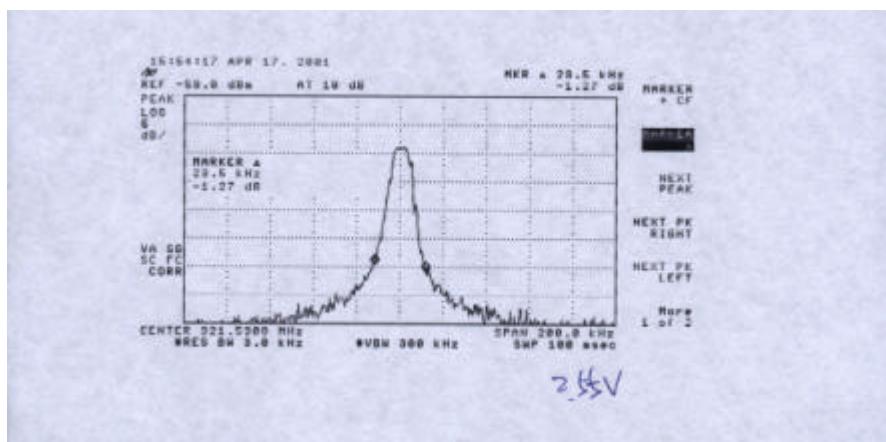


6. CHANGE THE VOLTAGE FROM -15% TO +15% TO CHECK THE FREQUENCY VARIATION

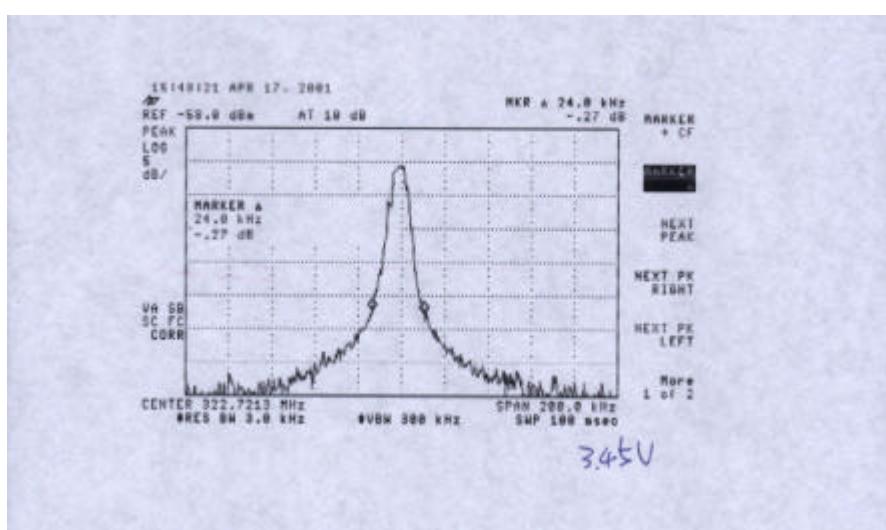
A. When voltage is 3V



B. When voltage is 2.55V (change -15%)

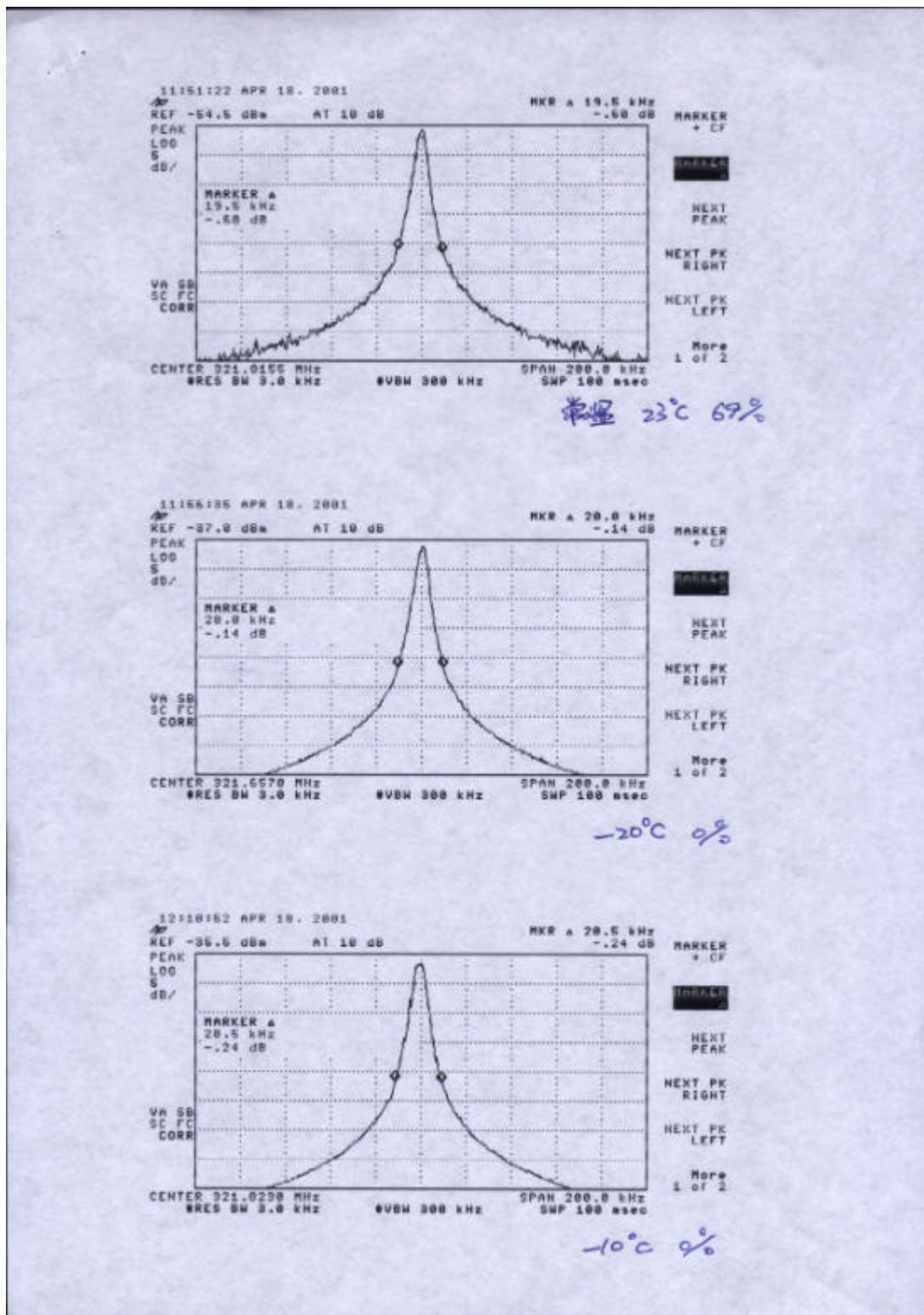


C. When voltage is 3.45V (change +15%)

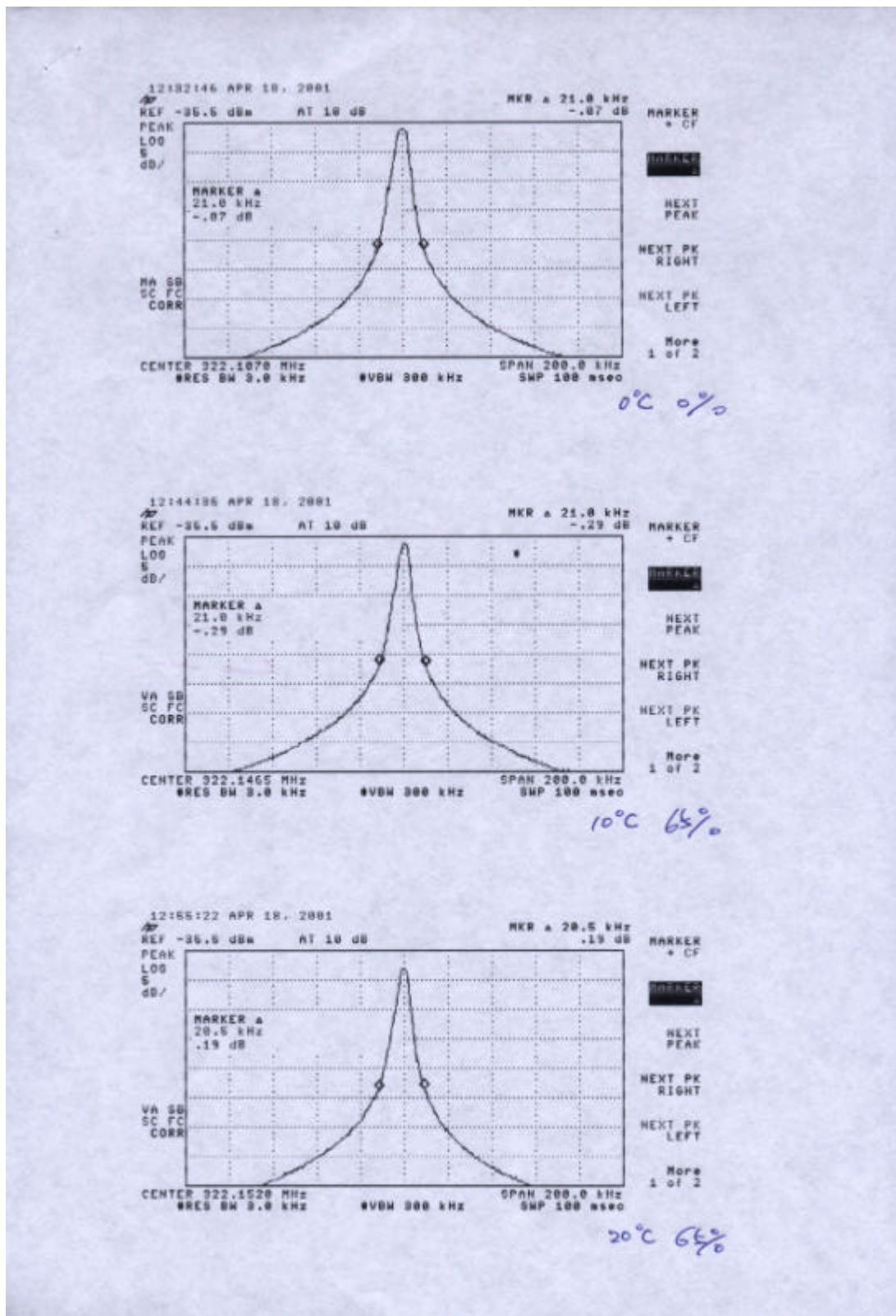


7. THE TEMPERATURE CHANGE TEST

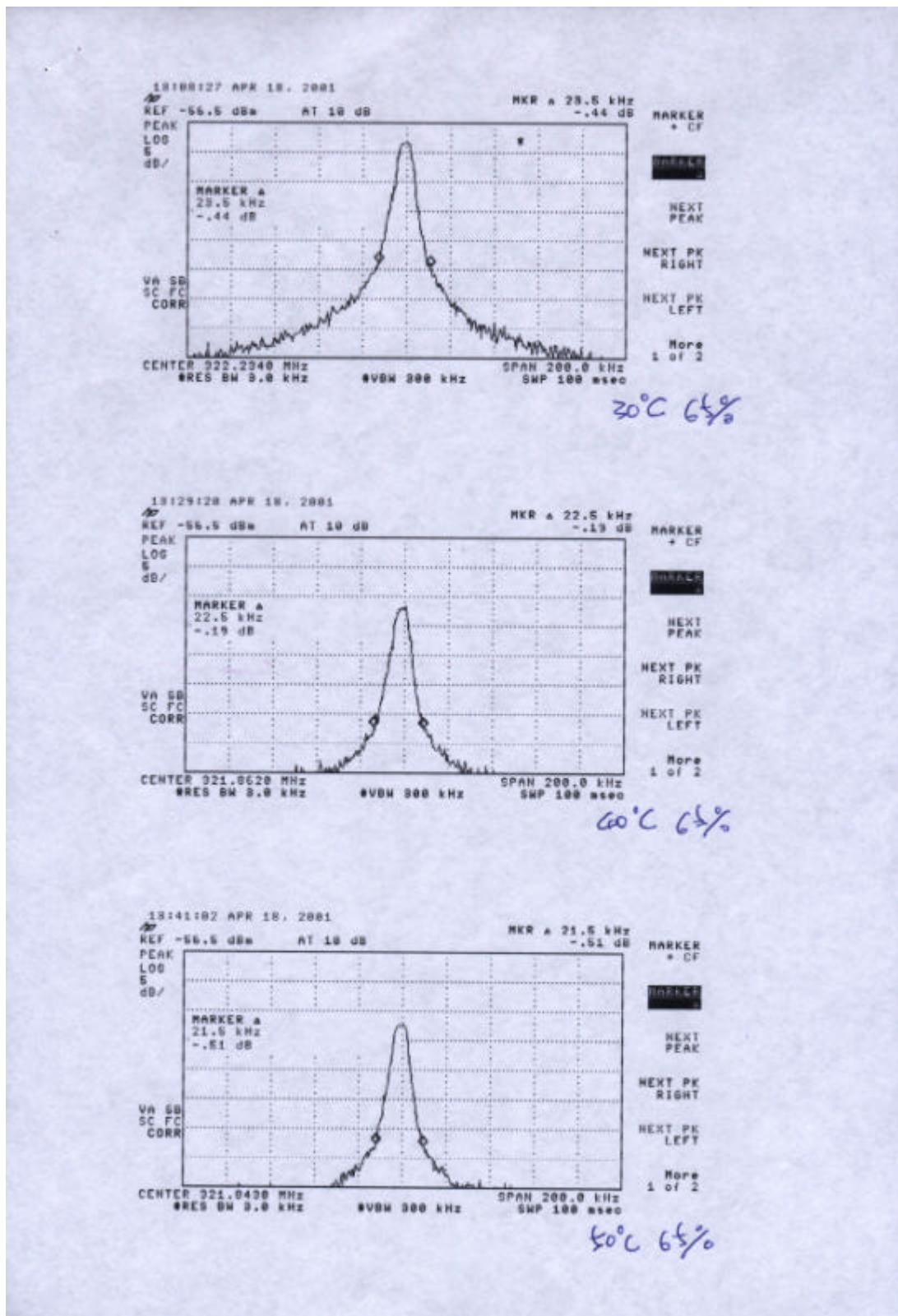
A. Temperature is 23°C, -20°C and -10°C



B. Temperature is 0°C, 10°C and 20°C



C. Temperature is 30°C, 40°C and 50°C



8. TRANSMISSION PERIOD

8.1 Limit

According to FCC Part 15, subpart C 15.231 (e)
The transmission more than 10 seconds.

8.2 Test Results

Please see attached plotter.

