Class B Certification Application

Under Part 15, Subpart C

(Class II Change)

EUT：TABLET (RF Mouse and Pen)

MODEL：ET-0405A-U

FCC ID：IXMET-0405

SRT REPORT # FID1D010

PREPARED FOR：

UNIVERSAL SCIENTIFIC INDUSTRIAL CO., LTD.

141, LANE 351, TAIPING RD., SEC. 1,

TSAO TUEN, NAN-TOU,

TAIWAN, R.O.C.

Universal Scientific Industrial Co., Ltd.
141, LANE 351, TAIPING RD., SEC. 1, TSAO TUEN, NAN-TOU TAIWAN, R.O.C.
TEL : 886-049-2350876 FAX : 886-049-2372931

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 benial 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,

Basil Lai
(Name, Surname)

PM
(Position/Title)

DATE： 4/9/01

Effective Dates：

From 2001.04.04 to 2002.04.01

EMI TESTING REPORT

EUT : TABLET (RF Mouse and Pen)

MODEL : ET-0405A-U

FCC ID : IXMET-0405

PREPARED FOR：

UNIVERSAL SCIENTIFIC INDUSTRIAL CO., LTD.

141, LANE 351, TAIPING RD., SEC. 1,

TSAO TUEN, NAN-TOU,

TAIWAN, R.O.C.

PREPARED BY：

SPECTRUM RESEARCH & TESTING LABORATORY INC.
NO. 101-10, LING 8, SHAN-TONG LI CHUNG – LI CITY,
TAOYUAN, TAIWAN, R. O. C.
TEL： (03) 4987684 FAX： (03) 4986528

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1. TEST REPORT CERTIFICATION

APPLICANT : UNIVERSAL SCIENTIFIC INDUSTRIAL CO., LTD.

ADDRESS : 141, LANE 351, TAIPING RD., SEC. 1,
TSAO TUEN, NAN-TOU,
TAIWAN, R.O.C.

EUT DESCRIPTION : TABLET (RF Mouse and Pen)

(A) POWER SUPPLY : FROM PC

(B) MODEL : ET-0405A-U

(C) FCC ID : IXMET-0405

FINAL TEST DATE : 04/12/2001

MEASUREMENT PROCEDURE USED :

* PART 15 SUBPART C, CLASS B OF FCC RULES AND REGULATIONS (47 CFR PART 15)
* 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 : Moore Weng DATE 4/12/2001
Moore Weng

SUPERVISOR : Sunyou Chen DATE 4/12/2001
Sunyou Chen

APPROVED BY : DATE 4/12/2001
Johnson Ho

2. TEST STATEMENT

2.1 TEST STATEMENT

1. This letter is to explain the EUT (TABLET) will be Class II changed.

2. The original FCC ID: IXMET-0405 was approved by FCC.
Date of Grant : 9/1/1999
The different between new one and old one is changed EUT case.

3. EUT conditions:

You can write a memo, draw freehand lines, straight lines circles, rectangles; and brush style signature in various thickness and colors.
Interface : USB
Operating Frequency : 750KHz
Mode 1 : Using Graphire 2 Pen
Mode 2 : Using Cordless Mouse

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:

No modification by SRT lab.

Universal Scientific Industrial Co., Ltd.
141, LANE 351, TAIPING RD., SEC. 1, TSAO TUEN, NAN-TOU TAIWAN, R.O.C.
TEL : 886-049-2350876 FAX : 886-049-2372931

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 : IXMET-0405 as listed in section 3.0 of modification to submitted by Spectrum Research and Testing Laboratory, Inc.

Respectfully,

Basil Lai
(Name, Surname)

PM
(Position/Title)

Effective Dates :

From 2001.04.04 to 2002.04.01

DATE : 4/9/'01

4. CONDUCTED POWER LINE TEST

4.1 TEST EQUIPMENT

The following test equipment were used during the conducted power line test :

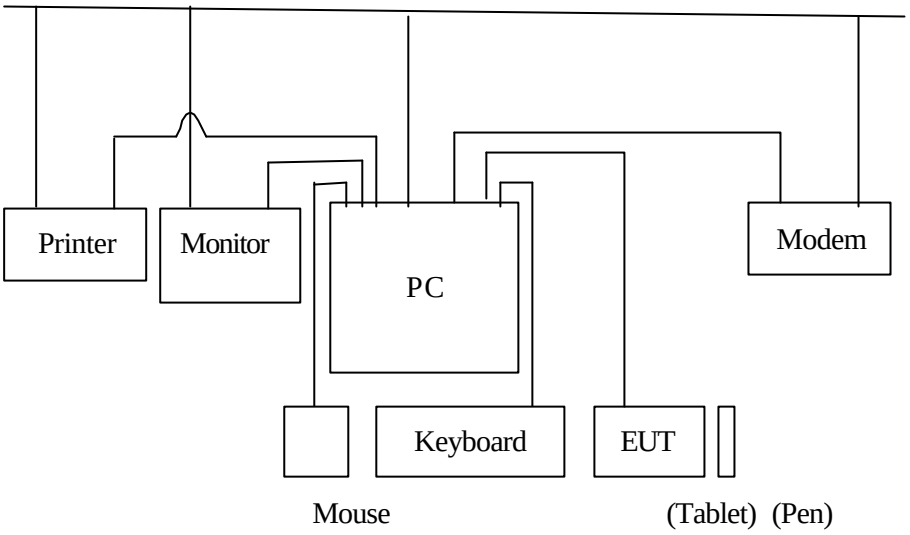
EQUIPMENT/ FACILITIES	SPECIFICATIONS	MANUFACTURER	MODEL#/ SERIAL#	DATE OF CAL. & CAL. CENTER	DUE DATE	FINAL TEST
EMI TEST RECEIVER	9 KHz TO 30 MHz	ROHDE & SCHWARZ	ESHS30/ 826003/008	MARCH 2001 R & S	1Y	
EMI TEST RECEIVER	9 KHz TO 2750 MHz	ROHDE & SCHWARZ	ESCS30/ 830245/012	JULY 2000 ETC	1Y	√
LISN	50 uH, 50 ohm	SOLAR ELECTRONICS	9252-50-R-24-BNC/ 951315	JULY 2000 ETC	1Y	√
LISN	50uH, 50 ohm	SOLAR ELECTRONICS	9252-50-R-24-BNC/ 951318	JULY 2000 ETC	1Y	√
SIGNAL GENERATOR	9 KHz TO 1080 MHz	ROHDE & SCHWARZ	SMY01/ 841104/019	MARCH 2001 ETC	1Y	√
POWER CONVERTER	50 TO 300 VAC 47 TO 63/50/60Hz	AFC	AFC-2KBB/ F100030030	APRIL 2001 SRT	1Y	√

4.2 TEST PROCEDURE

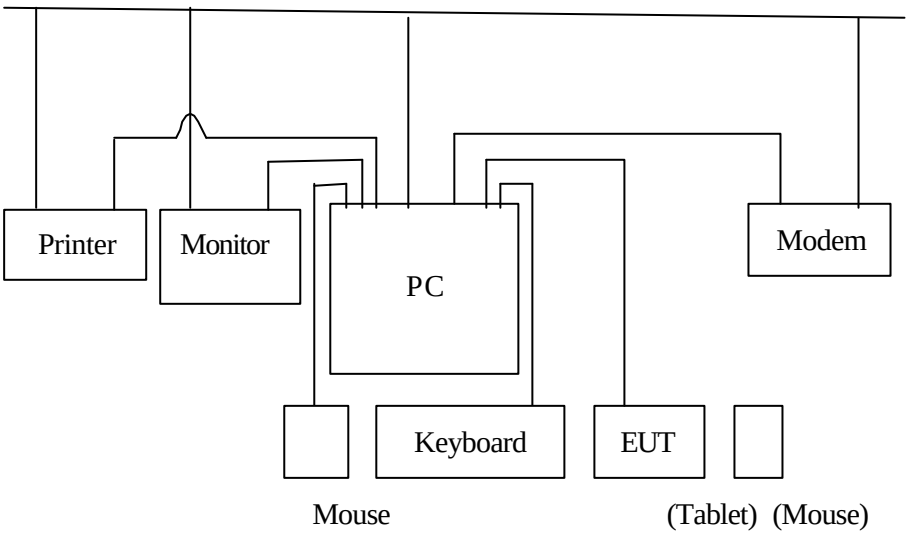
The EUT was tested according to ANSI C63.4 - 1992. The frequency spectrum from 0.45 MHz to 30 MHz was investigated The LISN used was 50 ohm / 50 uHenry as specified by section 5.1 of ANSI C63.4 - 1992 . Cables and peripherals were moved to find the maximum emission levels for each frequency.

4.3 TEST SETUP

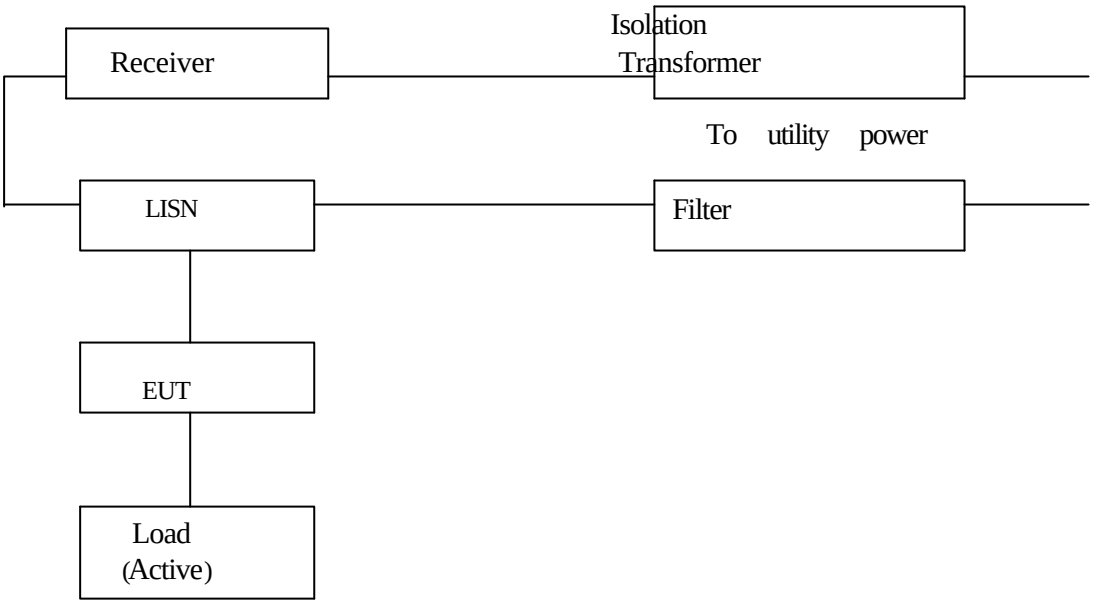
*Mode 1: Using Graphire 2 Pen



*Mode 2: Using Cordless Mouse



4.3 TEST SETUP



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 #	FCC/DoC
TABLET (RF Mouse and Pen)	UNIVERSAL SCIENTIFIC INDUSTRIAL CO., LTD.	ET-0405A-U	IXMET-0405

B. INTERNAL DEVICES

DEVICE	MANUFACTURER	MODEL #	FCC/DoC
N/A			

C. PERIPHERALS

DEVICE	MANUFACTURER	MODEL # SERIAL #	FCCID / DoC	CABLE
MONITOR	PANASONIC	TX-14H20PTP6	ACJ92512108	1.5m unshielded power cord 1.2m shielded data cable (S2)
PRINTER	LEXMARK	1000 COLOR JETPRINTER	DoC	1.5m unshielded power cord 1.2m shielded data cable (S2)
MODEM	SMARTEAM	103/212A	EF56A5103/212A	1.5m unshielded power cord 1.2m shielded data cable (S2)
MOUSE	ALT	OK-520	DoC	1.2m unshielded data cable
KEYBOARD	ACER	6311-TA	N/A	1.8m unshielded data cable
PC	MSI	MS-6209	DoC	1.8m unshielded power cord
GRAPHIRE 2 PEN	USI	EP-120E	DoC	N/A
CORDLESS MOUSE	USI	EC-120	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 regulations.

4.5 EUT OPERATING CONDITION

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

1. EUT power on.
2. Under WIN 98 run "EMI TEST" program.
   " H" pattern sent to the following peripherals:
   - Monitor or VGA
   - RS232 (modem)
   - Keyboard
   - Printer
   - FDD
   - HDD
3. Under WIN 98 run "WordPad" program.

4.6 CONDUCTED POWER LINE EMISSION LIMITS

FREQUENCY RANGE (MHz)	CLASS A	CLASS B
0.45 - 1.705	60.0 dBuV	48.0 dBuV
1.705 - 30	69.5 dBuV	48.0 dBuV

NOTE: In the above table, the tighten limit applies at the band edges.

4.7 CONDUCTED POWER LINE TEST RESULTS

The frequency spectrum from 0.45 MHz to 30 MHz was investigated. All readinges are quasi – peak values with a resolution bandwidth of 9 KHz.

Temperature : 25 ℃ Humidity : 54 %RH

FREQUENCY (MHz)	LINE1 (dBuV)	LINE2 (dBuV)	LIMIT (dBuV)
1.22	*	41.0	48.0
2.13	41.3	*	48.0
4.16	40.6	*	48.0
8.03	*	44.2	48.0
8.90	41.2	*	48.0
10.65	39.1	40.3	48.0

REMARKS : (1). * =Measurement does not apply for this frequency
(2). Uncertainty in conducted emmission measured is <+/ -2dB
(3). Any departure from specification : N/A
(4). Mode 1 : Using Graphire 2 Pen

SIGNED BY TESTING ENGINEER : Moore Wang

4.7 CONDUCTED POWER LINE TEST RESULTS

The frequency spectrum from 0.45 MHz to 30 MHz was investigated. All readinges are quasi – peak values with a resolution bandwidth of 9 KHz.

Temperature : 25 ℃ Humidity : 54 %RH

FREQUENCY (MHz)	LINE1 (dBuV)	LINE2 (dBuV)	LIMIT (dBuV)
1.22	39.3	40.4	48.0
1.42	40.7	42.0	48.0
4.16	40.4	*	48.0
8.03	*	43.5	48.0
9.55	41.5	*	48.0
10.68	39.0	39.8	48.0

REMARKS : (1). * =Measurement does not apply for this frequency
(2). Uncertainty in conducted emmission measured is <+/ -2dB
(3). Any departure from specification : N/A
(4). Mode 2 : Using Cordless Mouse

Moore Wang

SIGNED BY TESTING ENGINEER : _____

5. RADIATED EMISSION TEST

5.1 TEST EQUIPMENT

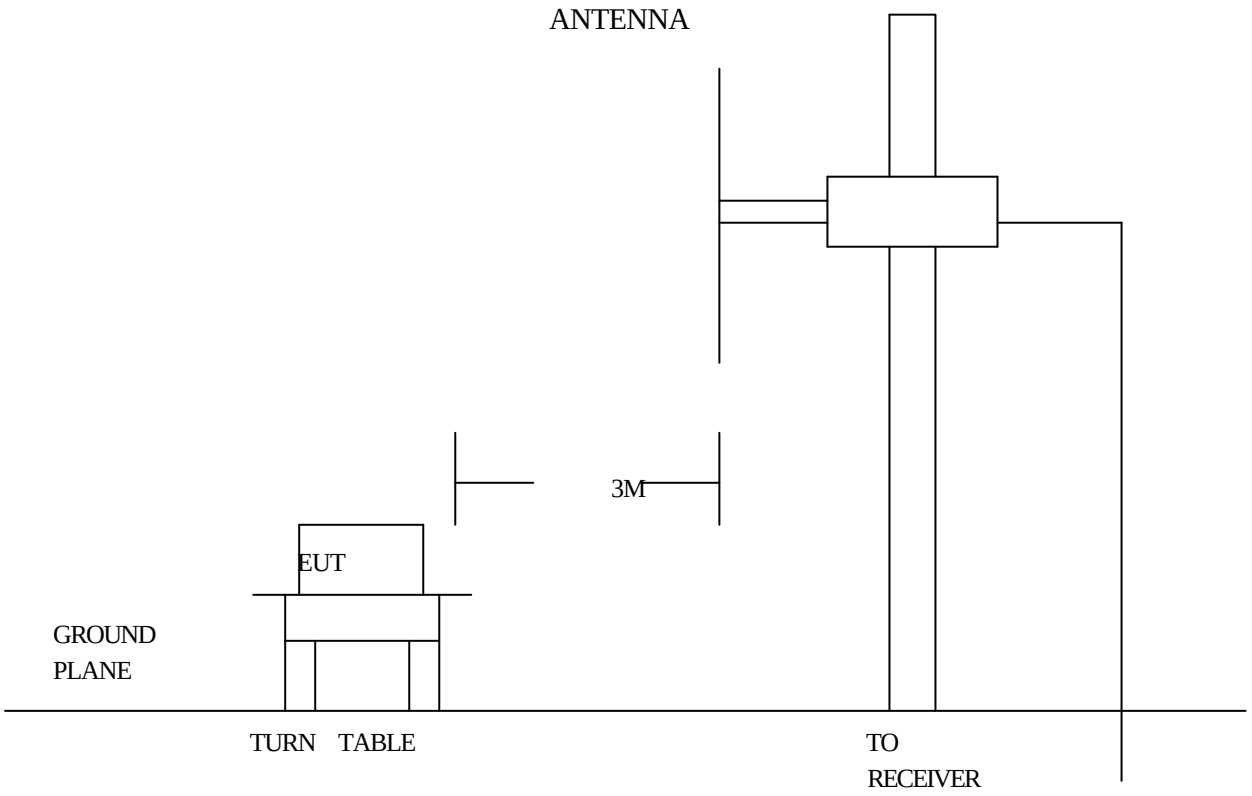
The following test equipment were used during the radiated emission test :

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	

5.2 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 1 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.

5.3 RADIATED TEST SET-UP

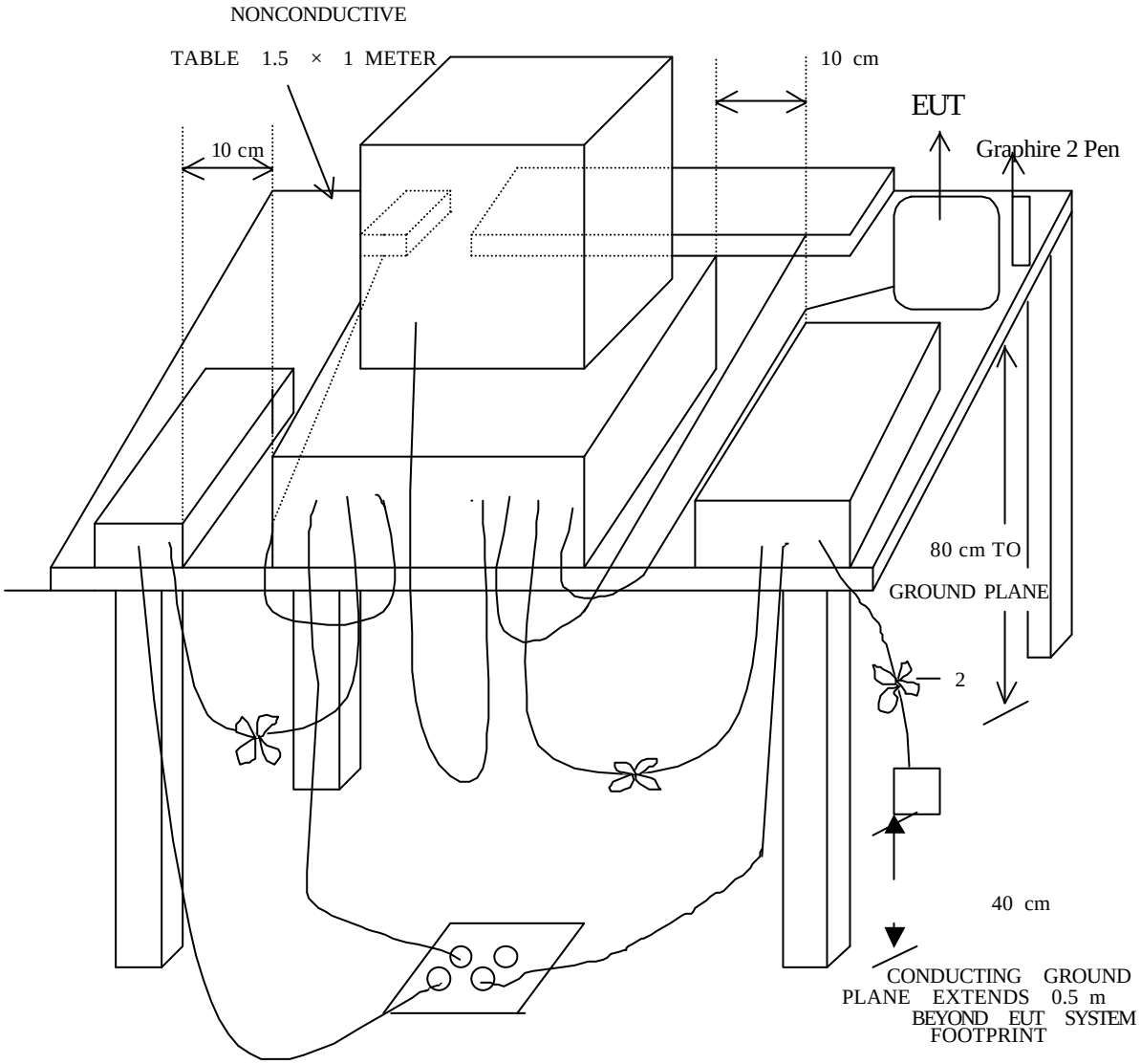


5.3 RADIATED TEST SET-UP

ANSI

ELECTRICAL AND ELECTRONIC EQUIIPMENT IN THE RANGE IN THE RANGE OF 9 KHz TO 40 GHz C63.4-1992

*Mode 1

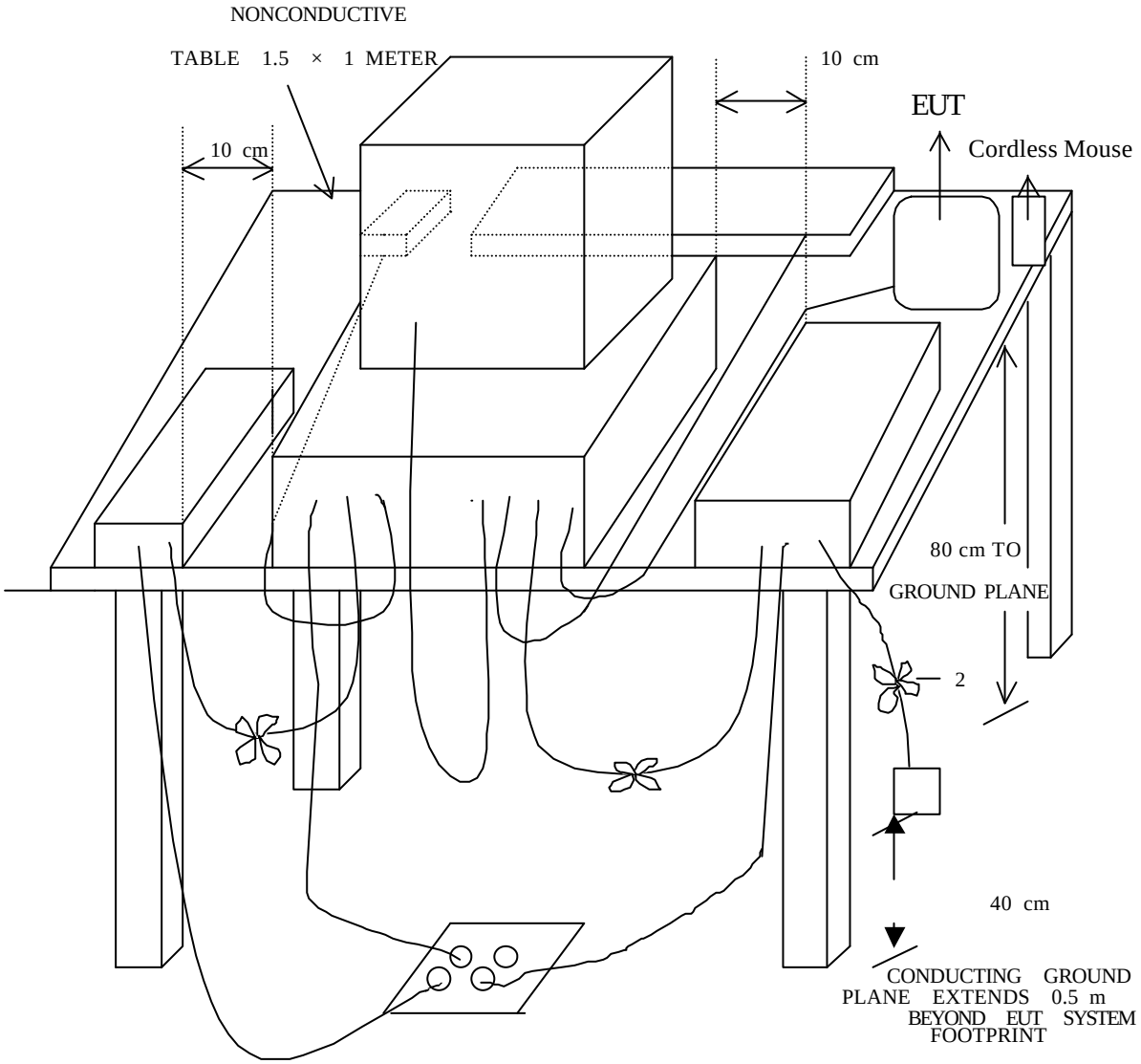


5.3 RADIATED TEST SET-UP

ANSI

ELECTRICAL AND ELECTRONIC EQUIIPMENT IN THE RANGE IN THE RANGE OF 9 KHz TO 40 GHz C63.4-1992

*Mode 2



5.4 CONFIGURATION OF THE THE EUT

Same as section 4.4 of this report

5.5 EUT OPERATING CONDITION

Same as section 4.5 of this report.

5.6 REDIATED 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

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.

5.7 RADIATED EMISSION TEST RESULTS

The frequency spectrum from 30 MHz to 1 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.

Temperature : 24 °C Humidity : 56 %RH

FREQ. (MHz)	FACTOR (dB)	ANT. FACTOR (dB/m)	READING (dBuV)		EMISSION (dBuV/m)		LIMITS (dBuV/m)
			HORIZ	VERT	HORIZ	VERT	
40.2514	0.8	14.5	*	19.0	*	34.3	40.0
135.2548	1.4	8.4	23.0	*	32.9	*	43.5
710.9874	3.7	22.4	*	16.3	*	42.4	46.0
803.9382	4.0	21.9	16.5	*	42.4	*	46.0
838.1346	4.1	21.9	*	16.4	*	42.4	46.0
901.3698	4.2	23.5	*	16.1	*	43.8	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 (emission) uV/m = Factor (dB)+Ant. Factor(dB/m)+reading(dBuV)
(6). Mode 1 : Using Graphire 2 Pen

SIGNED BY TESTING ENGINEER : Moore Wang

5.7 RADIATED EMISSION TEST RESULTS

The frequency spectrum from 30 MHz to 1 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.

Temperature : 24 °C Humidity : 56 %RH

FREQ. (MHz)	FACTOR (dB)	ANT. FACTOR (dB/m)	READING (dBuV)		EMISSION (dBuV/m)		LIMITS (dBuV/m)
			HORIZ	VERT	HORIZ	VERT	
47.3625	0.9	11.8	*	18.4	*	31.1	40.0
135.2548	1.4	8.4	22.9	*	32.8	*	43.5
160.2215	1.5	9.9	19.2	18.8	30.6	30.2	43.5
658.3254	3.5	21.3	16.6	*	41.4	*	46.0
710.9874	3.7	22.4	*	16.5	*	42.6	46.0
838.1346	4.1	21.9	*	16.2	*	42.2	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 (emission) uV/m = Factor (dB)+Ant. Factor(dB/m)+reading(dBuV)
(6). Mode 2 : Using Cordless Mouse

SIGNED BY TESTING ENGINEER : Moore Wang

5.8 FUNDAMENTAL FREQUENCY TEST

5.8.1 TEST EQUIPMENT

EQUIPMENT	MANUFACTURER	MODEL #
LOOP ANTENNA	R & S	HFH 2-Z2
RECEIVER	R & S	ESHS 30
SPECTRUM ANALYZER	HP	8568B
PRE-AMPLIFIER	HP	8447D

5.8.2 TEST PROCEDURE

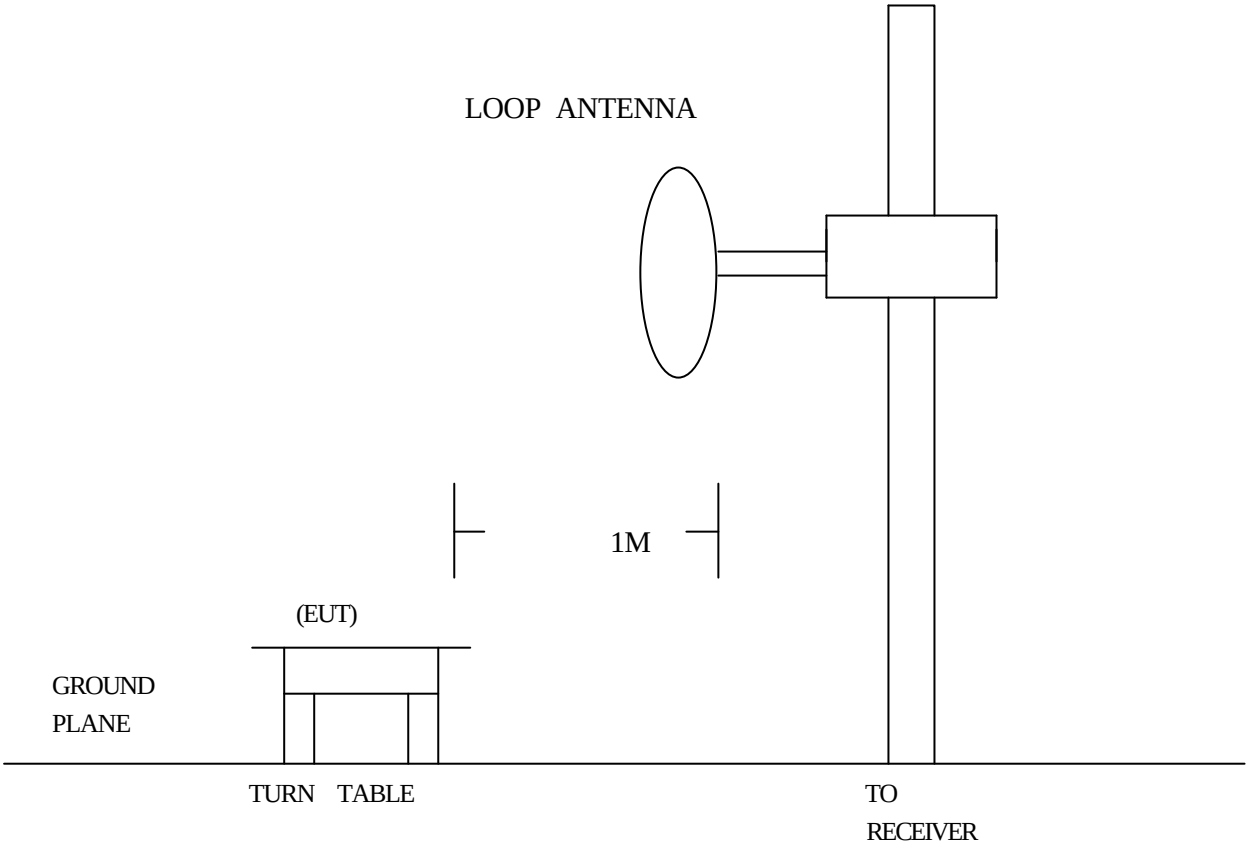
1. Sst-up LOOP antenna at 3m distance.
2. The signal is too small to detect.
3. Move LOOP antenna at 1m distance.
4. Turn the turn table.
5. After find the max. Data then changed the height of antenna ftom 1m to 2m to find the max of emission.
6. Turn the turn table again.
7. Changed the LOOP antenna to polarization.

NOTE :

1). Both polarizations (vertical and horizontal were tested) .

2). The testing distance is under 15 cm between TX and RX. We can not pick up any emission if the distance is over 15 cm. We found the max. Signal is on the vertical and pen touch to the TX (board).

5.8.3 TEST SETUP



5.8.4 CONFIGURATION OF THE EUT

Same as section 4.5 of this report

5.8.5 EUT OPERATING CONDITION

Same as section 4.6 of this report

5.8.6 RADIATED EMISSION LIMIT

FREQUENCY (MHz)	FIELD STRENGTH (MICROVOLTS/METER)	MEASUREMENTDISTANCE (METERS)
0.009 - 0.490	2400/F (KHz)	300
0.490 - 1.705	24000/F (KHz)	30
1.705 - 30.00	30	30

NOTE : Same as section 5.6 of this report.

5.8.7 RADIATED EMISSION TEST RESULT

The frequency spectrum from 450 KHz to 30 MHz was investigated. The values under 30MHz with a resolution bandwidth of 10KHz. The distance was 1 meter. The following reading data were changed from original 1 meter's data to 30 meter's data.

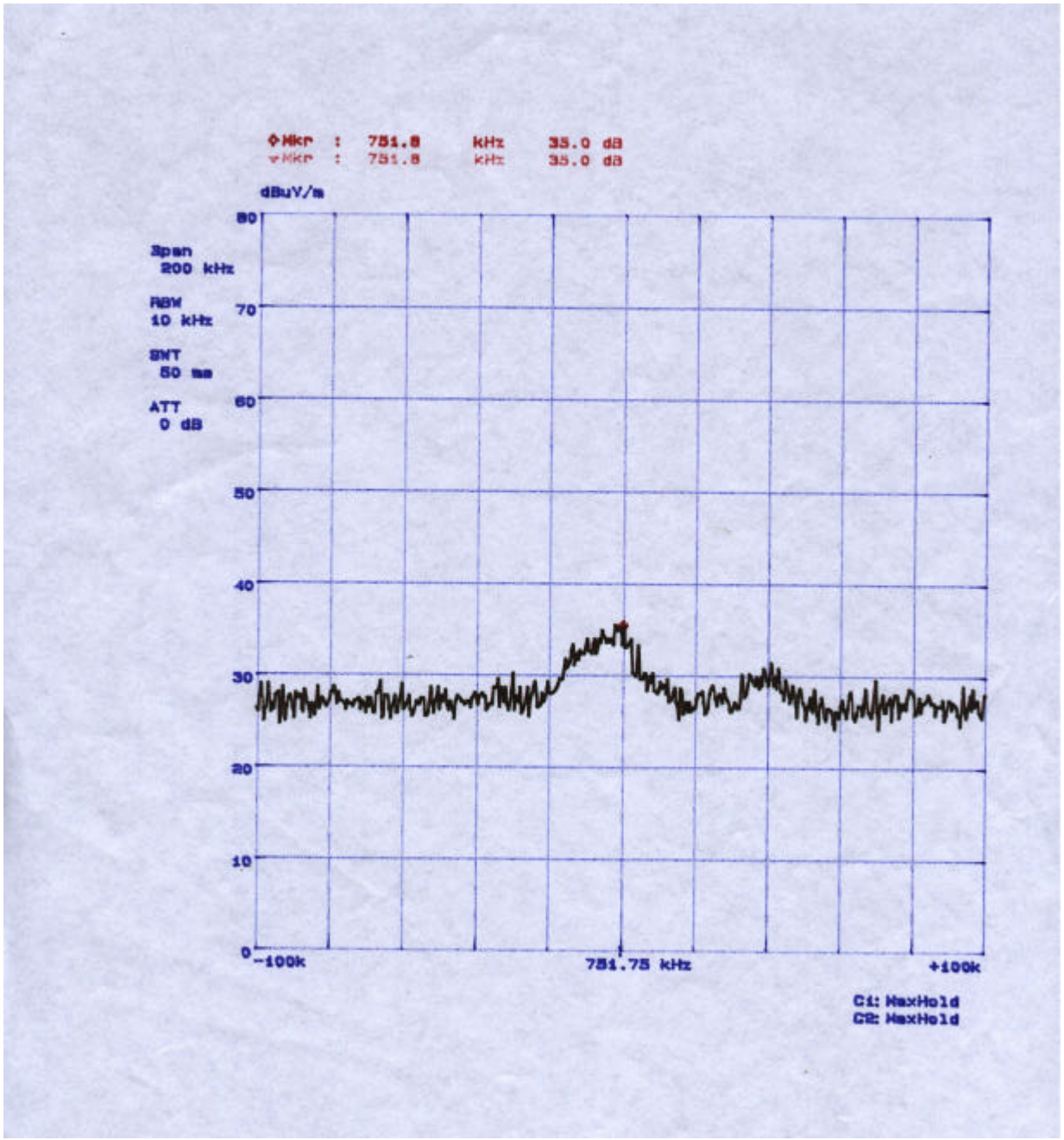
Temperature : 25 ℃ Humidity : 54 %RH

FREQ. (KHz)	FACTOR (dB)	ANT. FACTOR (dB/m)	READING (dBuV)		EMISSION (dBuV/m)		LIMITS (dBuV/m)
			HORIZ	VERT	HORIZ	VERT	
751.8	0.2	20.0	5.6	6.9	25.8	27.1	30.1

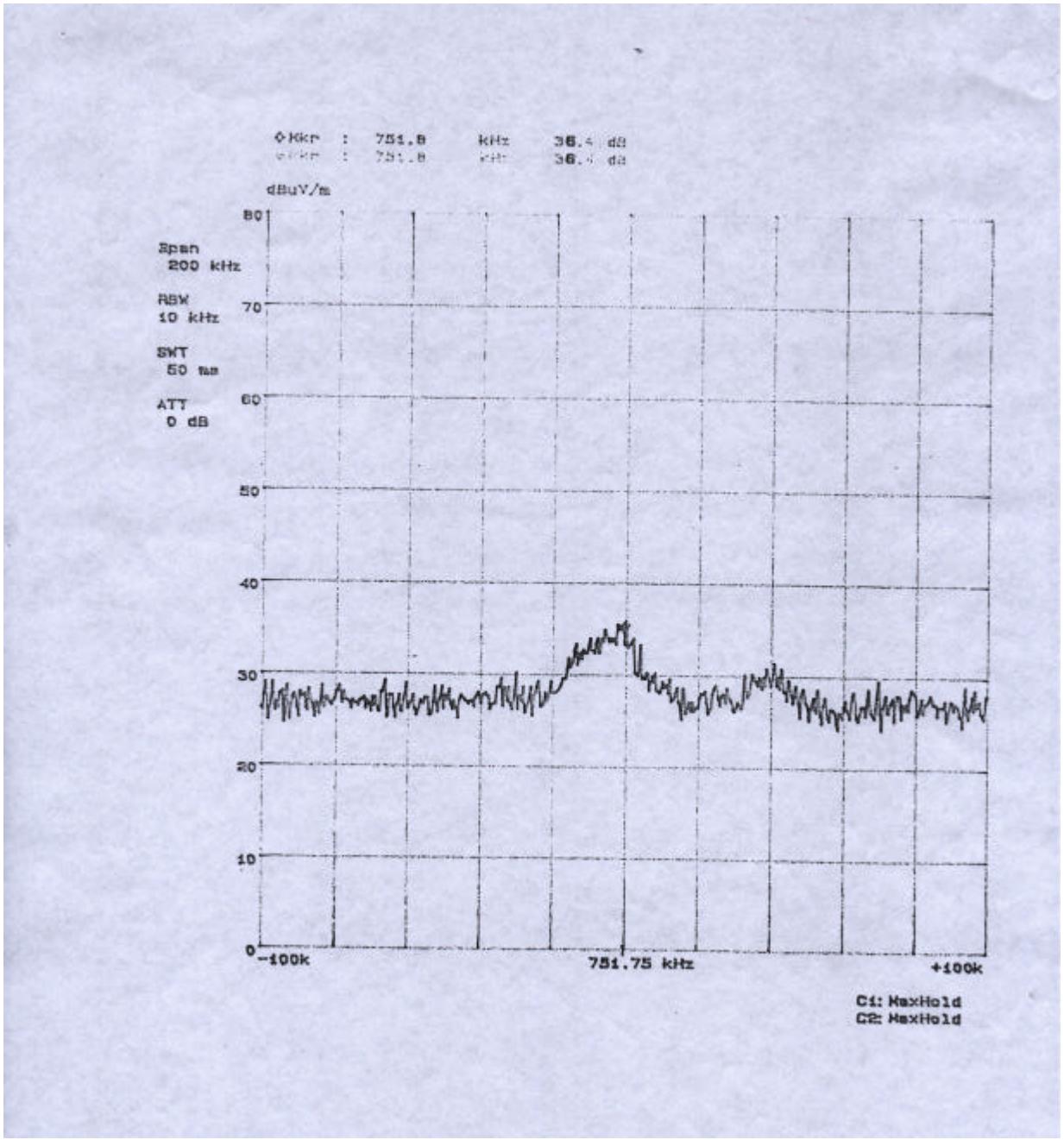
REMARKS : (1). *= Measurement does not apply for this frequency.
(2). Uncertainty in radiated emission measured is <+/-4dB
(3). Any departure from specification : N/A
(4). Limits : 20 log 24000 / 751.8 = 30.1dBuV
(5). Sample calculation
20 log (emission) uV/m = Factor(dB)+Ant. factor(dB/m)+reading(dBuV)
(6). The calculation of reading data that changed from 1 meter to 30 meters is : 1 meter reading data (uV) x 1/30 = 30 meters reading data(uV)
(7). Example : Horizontal reading data is 35.0dBuV at 1m
⇒ 35.0dBuV = 56.0uV
56.0uV / 30 = 1.9uV at 30m
⇒ 20log 1.9uV = 5.6dBuV
(8). Mode 1 : Using Graphire 2 Pen
(9). Standby : 751.8KHz
(10). Second harmonic is low and does not apply for this frequency.

SIGNED BY TESTING ENGINEER : Moore Wang

*Mode 1 : Using Graphire 2 Pen (Standby)
*Horizontal



*Mode 1 : Using Graphire 2 Pen (Standby)
*Vertical



5.8.7 RADIATED EMISSION TEST RESULT

The frequency spectrum from 450 KHz to 30 MHz was investigated. The values under 30MHz with a resolution bandwidth of 10KHz. The distance was 1 meter. The following reading data were changed from original 1 meter's data to 30 meter's data.

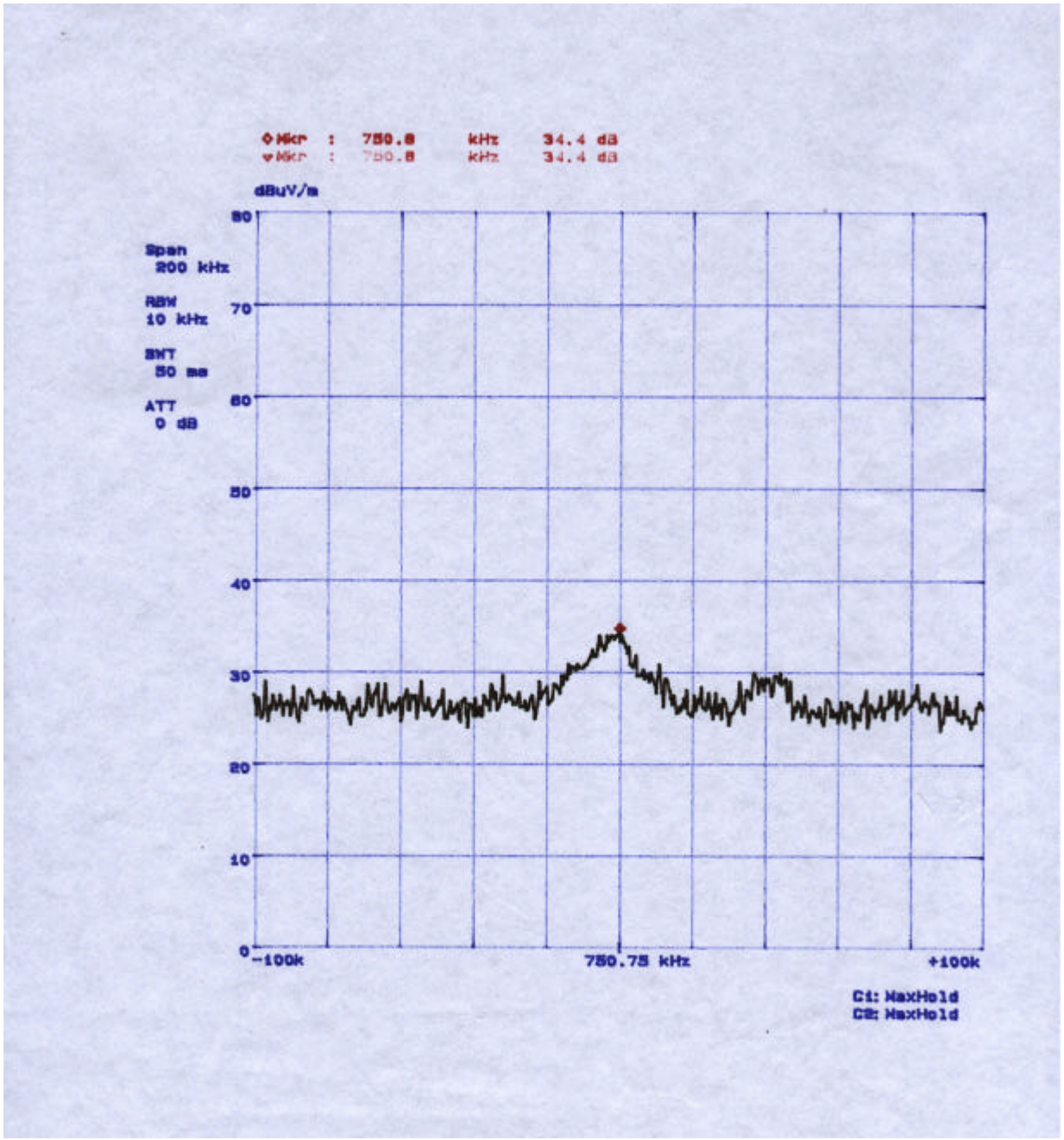
Temperature : 25 ℃ Humidity : 54 %RH

FREQ. (KHz)	FACTOR (dB)	ANT. FACTOR (dB/m)	READING (dBuV)		EMISSION (dBuV/m)		LIMITS (dBuV/m)
			HORIZ	VERT	HORIZ	VERT	
750.8	0.2	20.0	4.6	7.7	24.8	27.9	30.1

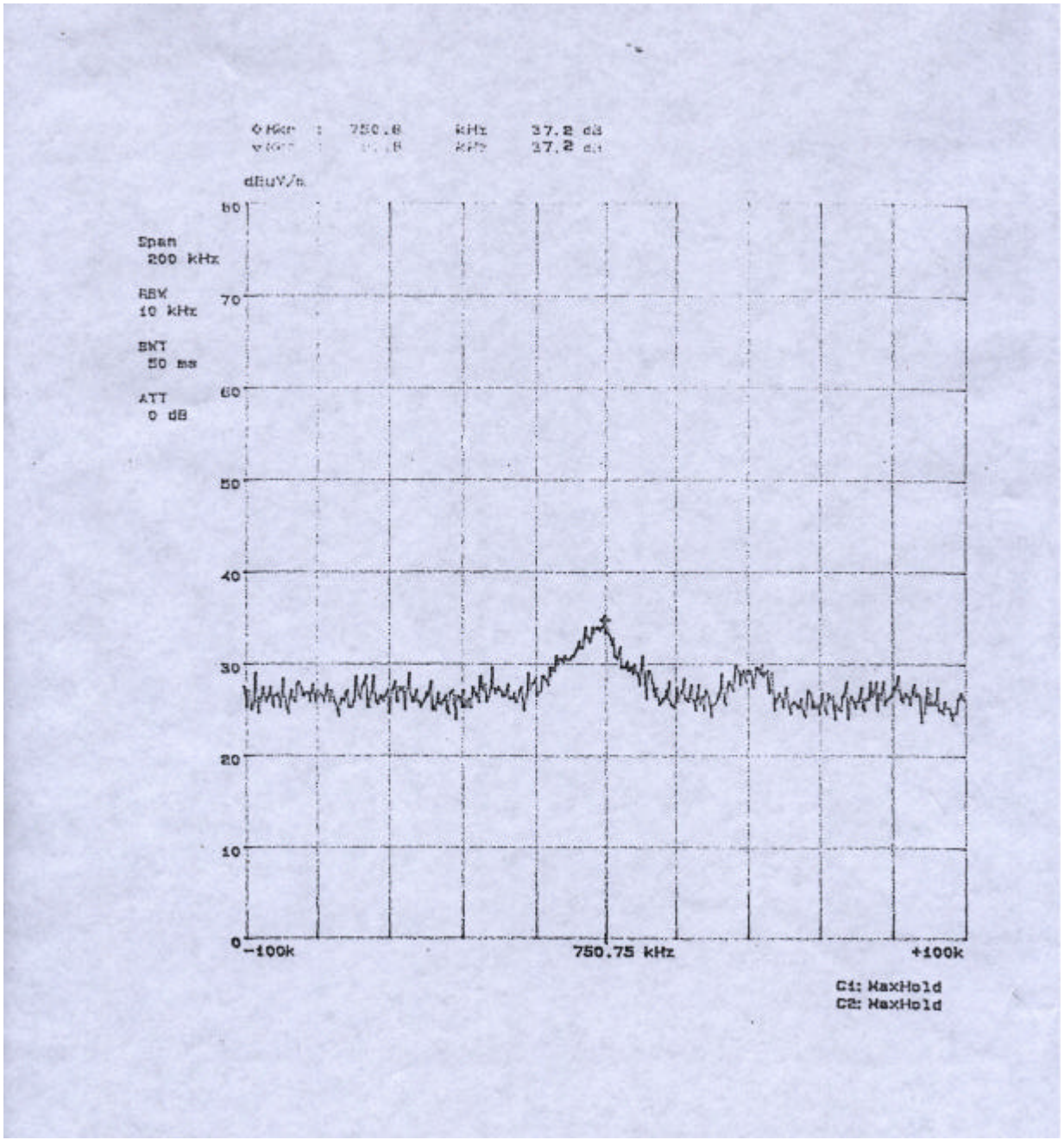
REMARKS : (1). *= Measurement does not apply for this frequency.
(2). Uncertainty in radiated emission measured is <+/-4dB
(3). Any departure from specification : N/A
(4). Limits : 20 log 24000 / 750.8 = 30.1dBuV
(5). Sample calculation
20 log (emission) uV/m = Factor(dB)+Ant. factor(dB/m)+reading(dBuV)
(6). The calculation of reading data that changed from 1 meter to 30 meters is : 1 meter reading data (uV) x 1/30 = 30 meters reading data(uV)
(7). Example : Horizontal reading data is 34.4dBuV at 1m
⇒ 34.4dBuV = 52.0uV
52.0uV / 30 = 1.7uV at 30m
⇒ 20log 1.7uV = 4.6dBuV
(8). Mode 1 : Using Graphire 2 Pen
(9). Up button : 750.8KHz
(10). Second harmonic is low and does not apply for this frequency.

SIGNED BY TESTING ENGINEER : Moore Wang

*Mode 1 : Using Graphire 2 Pen (Up button)
*Horizontal



*Mode 1 : Using Graphire 2 Pen (Up button)
*Vertical



5.8.7 RADIATED EMISSION TEST RESULT

The frequency spectrum from 450 KHz to 30 MHz was investigated. The values under 30MHz with a resolution bandwidth of 10KHz. The distance was 1 meter. The following reading data were changed from original 1 meter's data to 30 meter's data.

Temperature : 25 ℃ Humidity : 54 %RH

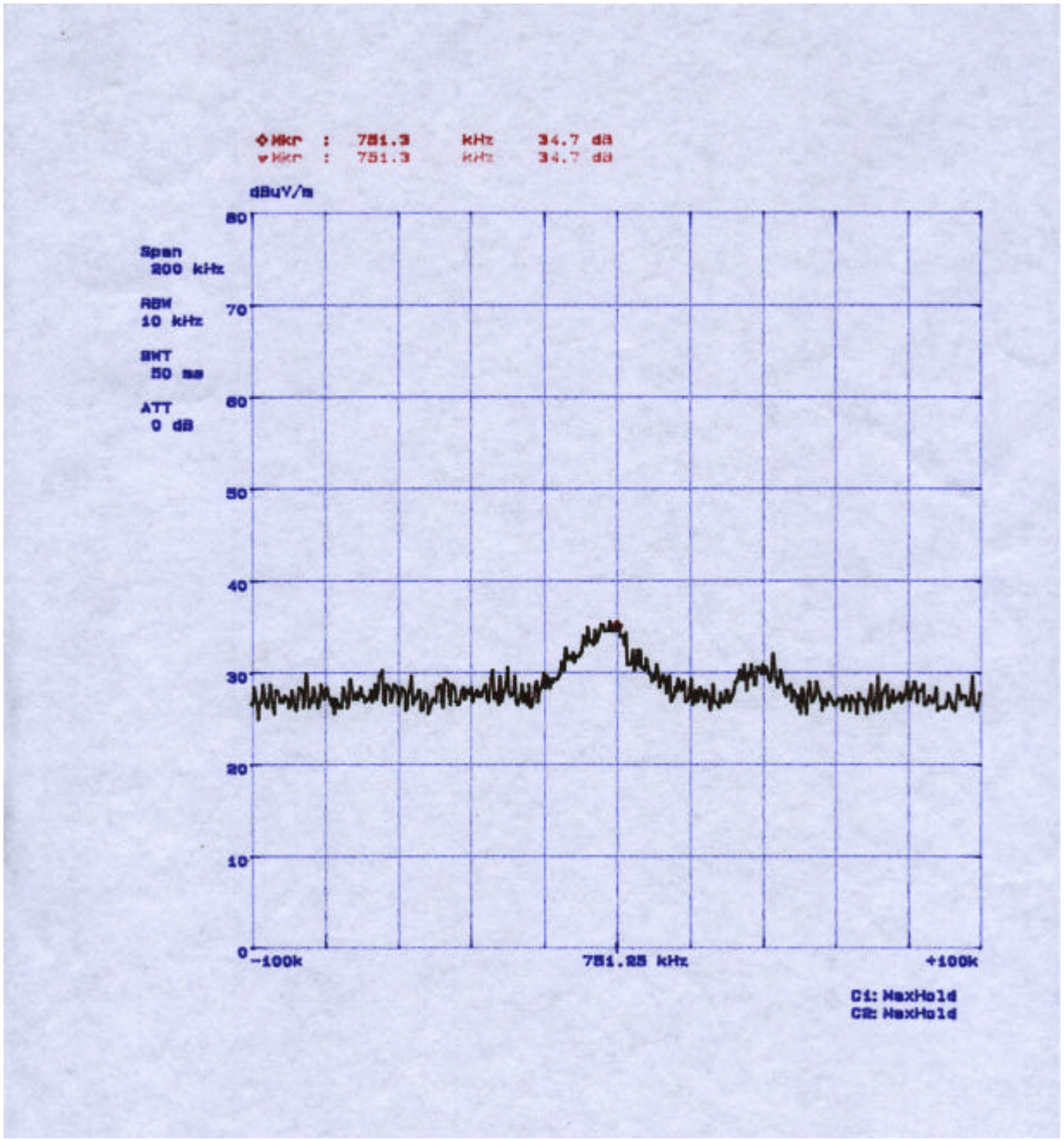
FREQ. (KHz)	FACTOR (dB)	ANT. FACTOR (dB/m)	READING (dBuV)		EMISSION (dBuV/m)		LIMITS (dBuV/m)
			HORIZ	VERT	HORIZ	VERT	
751.3	0.2	20.0	5.2	6.3	25.4	26.5	30.1

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). Limits : 20 log 24000 / 751.3 = 30.1dBuV
(5). Sample calculation
20 log (emission) uV/m = Factor(dB)+Ant. factor(dB/m)+reading(dBuV)
(6). The calculation of reading data that changed from 1 meter to 30 meters is : 1 meter reading data (uV) x 1/30 = 30 meters reading data(uV)
(7). Example : Horizontal reading data is 34.7dBuV at 1m
⇒ 34.7dBuV = 54.0uV
54.0uV / 30 = 1.8uV at 30m
⇒ 20log 1.8uV = 5.2dBuV
(8). Mode 1 : Using Graphire 2 Pen
(9). Down button : 751.3KHz
(10). Second harmonic is low and does not apply for this frequency.

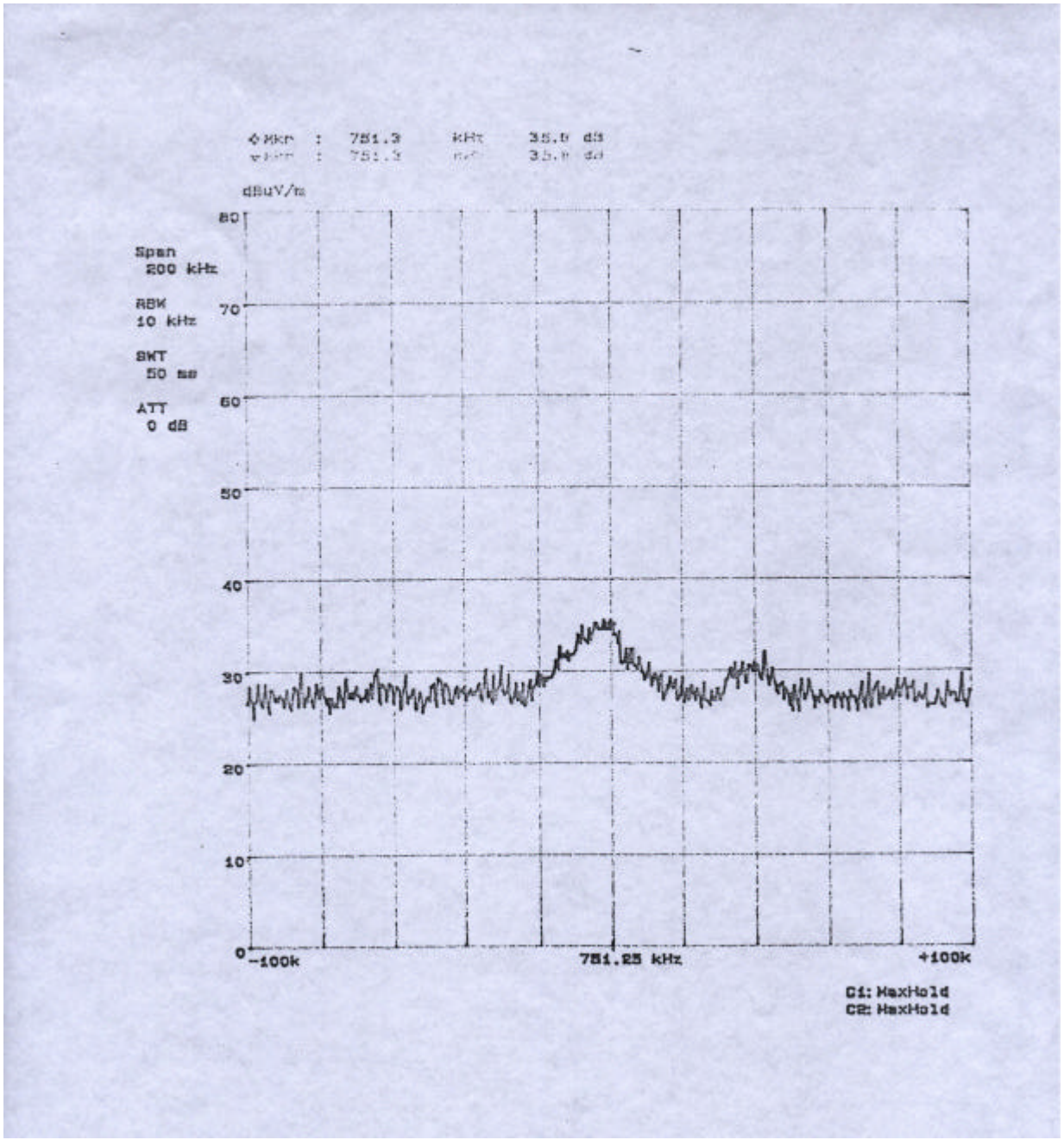
Moore Wang

SIGNED BY TESTING ENGINEER : _____

*Mode 1 : Using Graphire 2 Pen (Down button)
*Horizontal



*Mode 1 : Using Graphire 2 Pen (Down button)
*Vertical



5.8.7 RADIATED EMISSION TEST RESULT

The frequency spectrum from 450 KHz to 30 MHz was investigated. The values under 30MHz with a resolution bandwidth of 10KHz. The distance was 1 meter. The following reading data were changed from original 1 meter's data to 30 meter's data.

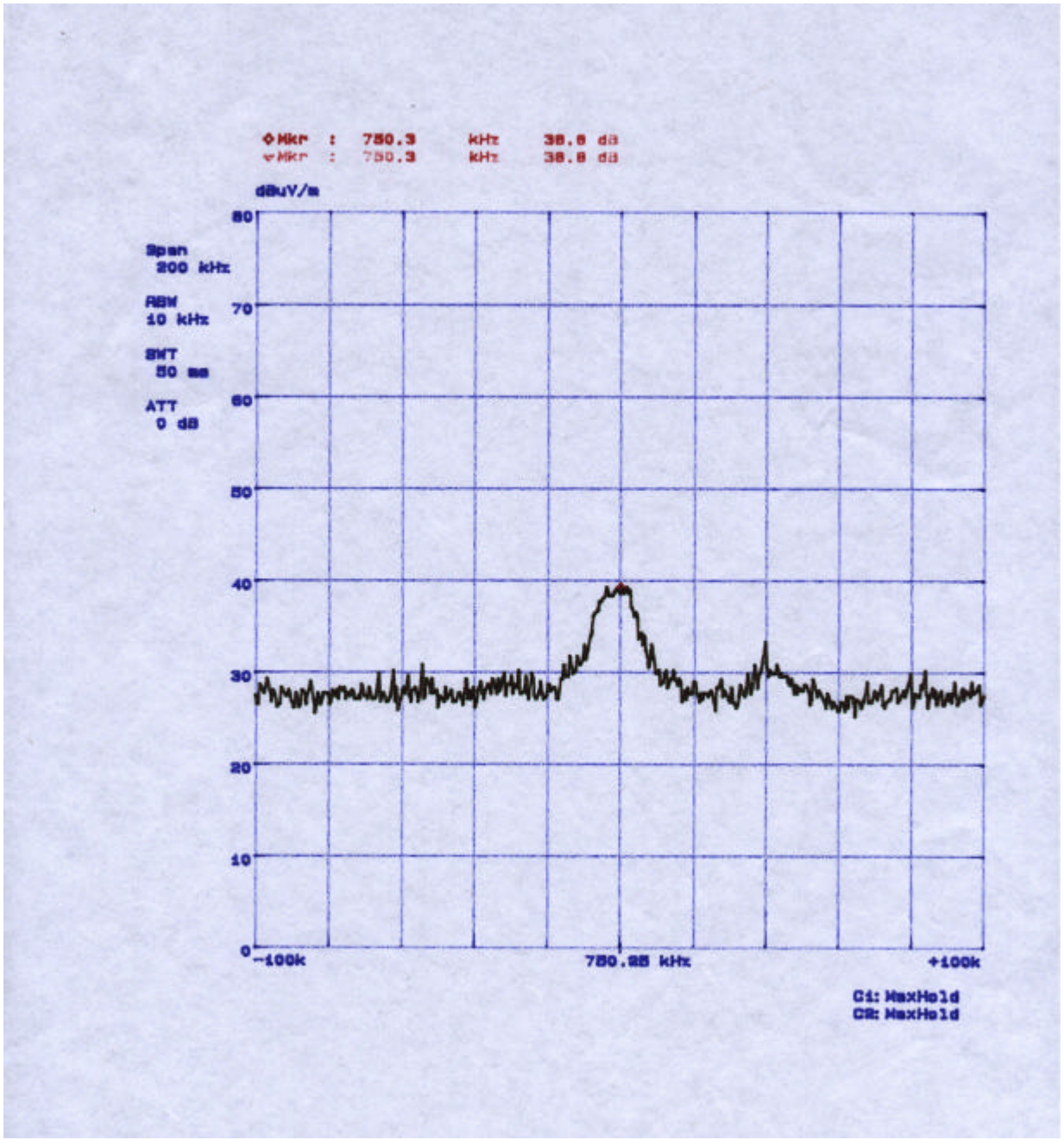
Temperature : 25 ℃ Humidity : 54 %RH

FREQ. (KHz)	FACTOR (dB)	ANT. FACTOR (dB/m)	READING (dBuV)		EMISSION (dBuV/m)		LIMITS (dBuV/m)
			HORIZ	VERT	HORIZ	VERT	
750.3	0.2	20.0	9.2	5.4	29.4	25.6	30.1

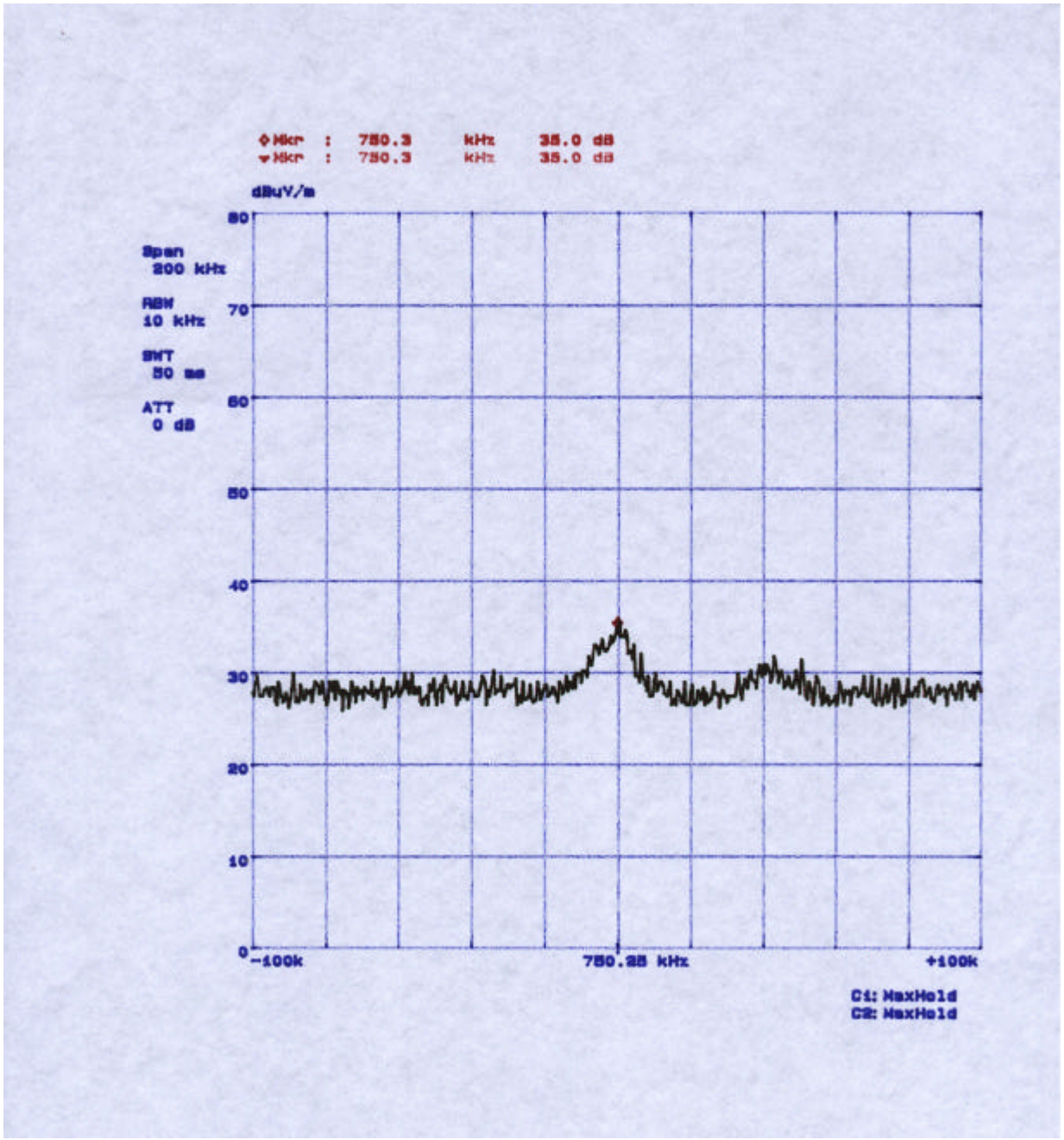
REMARKS : (1). *= Measurement does not apply for this frequency.
(2). Uncertainty in radiated emission measured is <+/-4dB
(3). Any departure from specification : N/A
(4). Limits : 20 log 24000 / 750.3 = 30.1dBuV
(5). Sample calculation
20 log (emission) uV/m = Factor(dB)+Ant. factor(dB/m)+reading(dBuV)
(6). The calculation of reading data that changed from 1 meter to 30 meters is : 1 meter reading data (uV) x 1/30 = 30 meters reading data(uV)
(7). Example : Horizontal reading data is 38.8dBuV at 1m
⇒ 38.8dBuV = 87.0uV
87.0uV / 30 = 2.9uV at 30m
⇒ 20log 2.9uV = 9.2dBuV
(8). Mode 2 : Using Cordless Mouse
(9). 750.3KHz
(10). Second harmonic is low and does not apply for this frequency.

SIGNED BY TESTING ENGINEER : Moore Wang

*Mode 2 : Using Cordless Mouse
*Horizontal



*Mode 2 : Using Cordless Mouse
*Vertical



6. BANDWITH

6.1 Limit

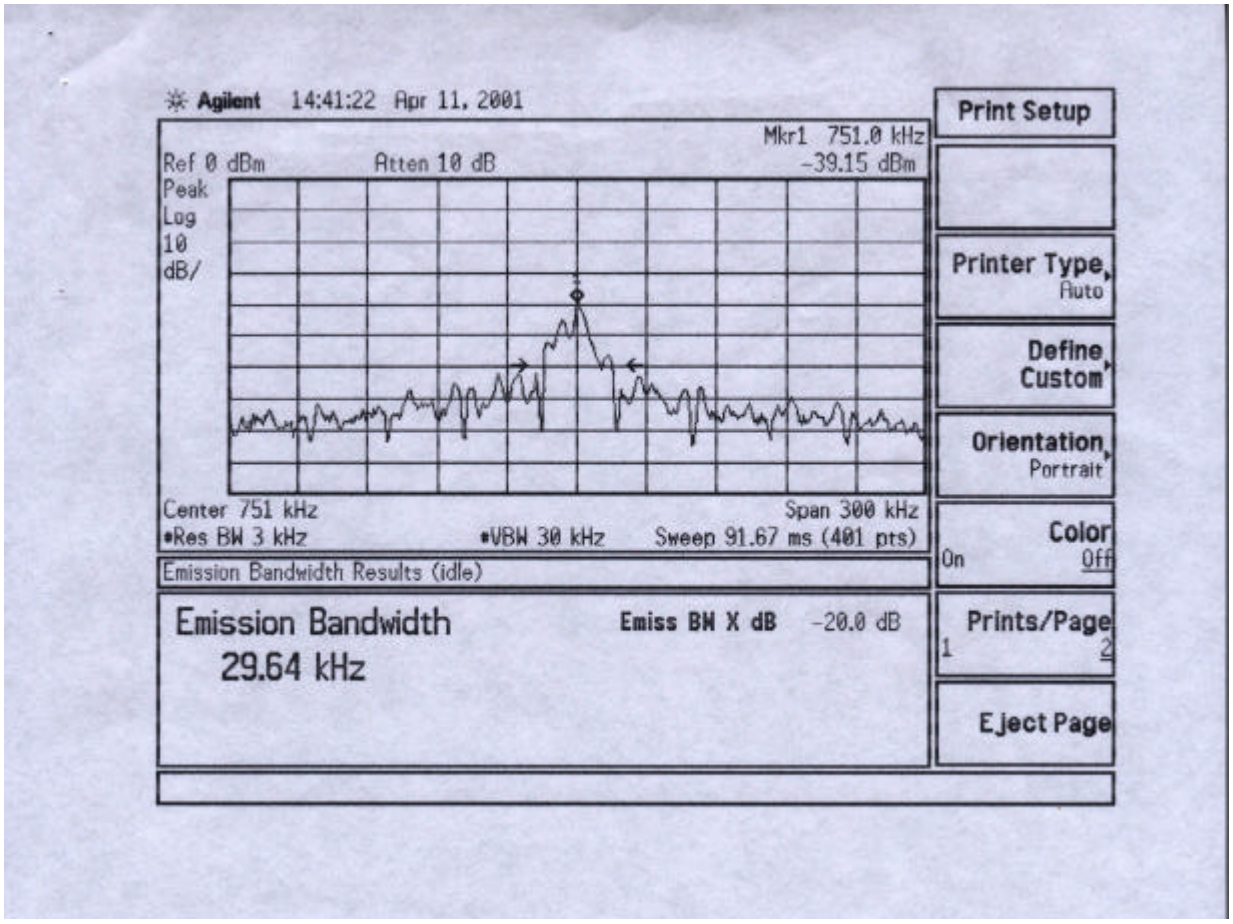
20dB bandwidth

6.2 Test Results

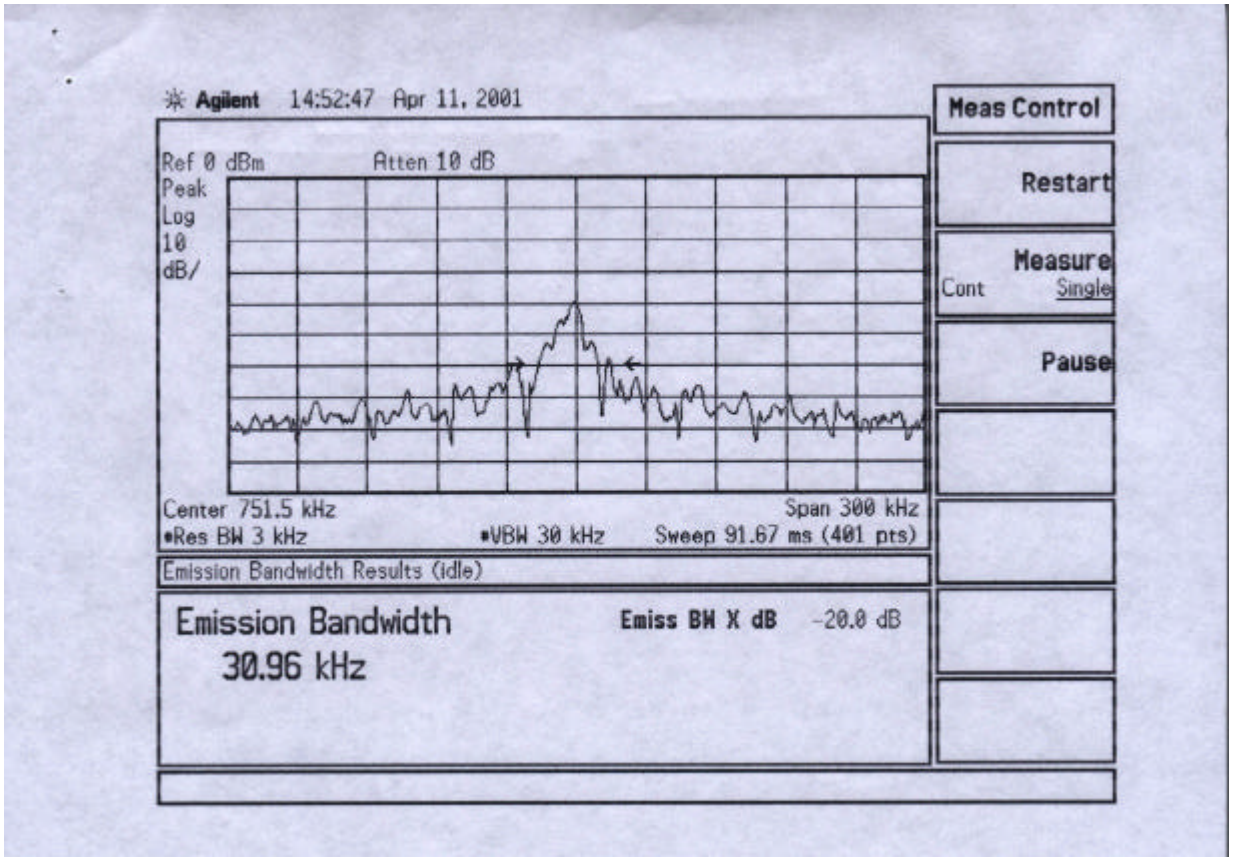
Mode	Mode	Operation frequency	20dB bandwidth
Mode 1	Using Graphire 2 Pen : Standby	751.0KHz	29.64KHz
	Using Graphire 2 Pen : Up button	751.5KHz	30.96KHz
	Using Graphire 2 Pen : Down button	750.8KHz	30.67KHz
Mode 2	Using Cordless Mouse	750.8KHz	30.46KHz

Please see attached plotter.

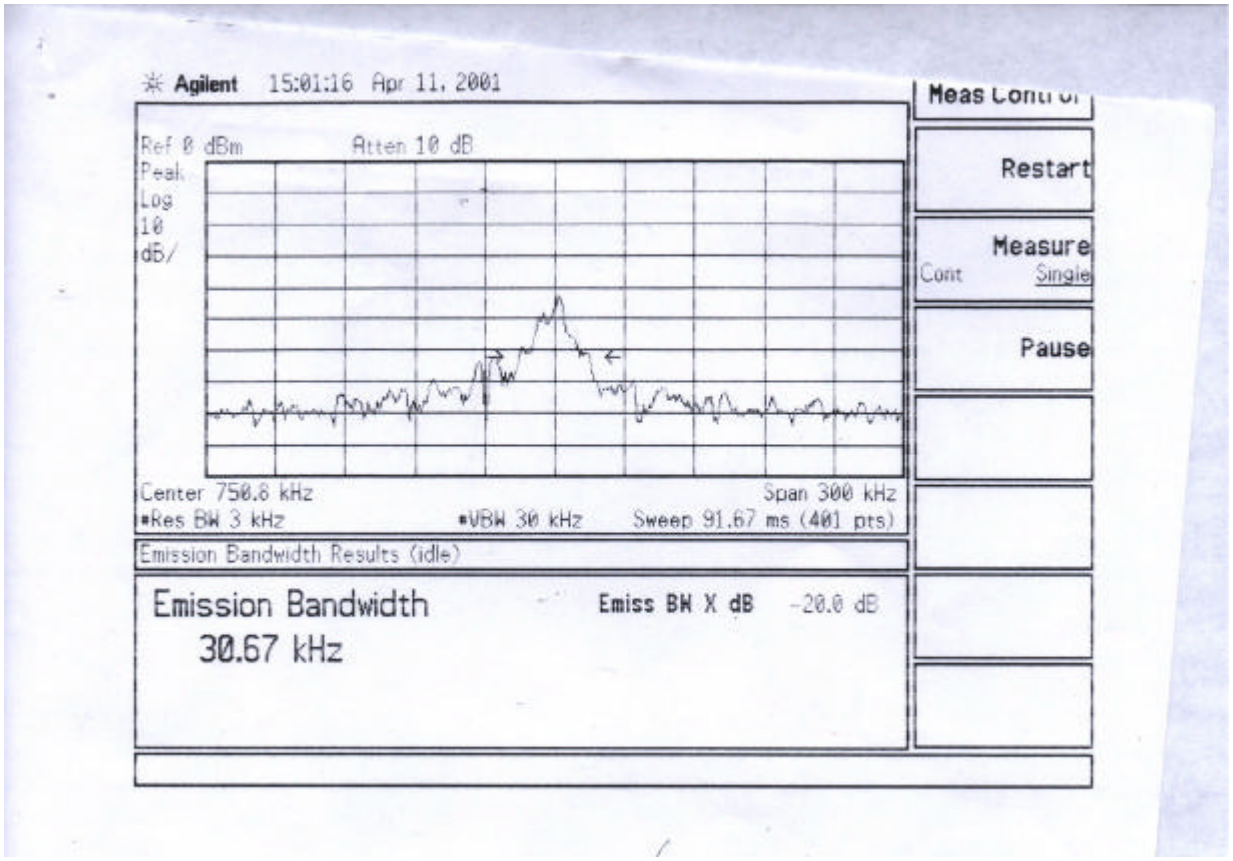
*Mode 1 : Using Graphire 2 Pen (Standby)



*Mode 1 : Using Graphire 2 Pen (Up button)



*Mode 1 : Using Graphire 2 Pen (Down button)



*Mode 2 : Using Cordless Mouse