

Class B Certification Application

Under part 15, subpart B & C

EUT : 900MHz Cordless Mini Phone

MODEL : MNP-310

FCC ID : OHGMNP-310

SRT REPORT # T1A024

PREPARED FOR :

CHAW KHONG TECHNOLOGY CO., LTD.

NO. 29, WU-CHUANG 3RD RD.,

WU-KU INDUSTRIAL PARK,

TAIPEI COUNTY, TAIWAN, R.O.C.

CHAW KHONG TECHNOLOGY CO., LTD.
喬工科技股份有限公司

NO 29, WU CHUANG 3RD ROAD, WU KU INDUSTRIAL PARK TAIPEI COUNTY, TAIWAN

台北縣五股工業區五權三路 29 號

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WEB SITE : WWW.CKCORP.COM.TW

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., 1603 Skinners Turn Road, Owings, Maryland 20736, will act as our representative in the matters relating to FCC applications for equipment approval. This includes the signing of related documents, the transmitting of required fees, and receiving correspondence and notifications from the FCC. The acts performed by Spectrum Research and Testing Laboratory, Inc., especially modifications to our equipment under testing in order to meet FCC standards 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 benefits, pursuant to Section 5301 of the Anti-Drug Abuse Act of 1988, 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) 855-2262.

Respectfully,

W-H / yksh
Last, First

Manager / RSD
Position/ Title

10/13/2000
Date

Effective Dates : November 12, 2000 to November 12, 2001.

EMI TESTING REPORT

EUT : 900MHz Cordless Mini Phone

MODEL : MNP-310

FCC ID : OHGMNP-310

PREPARED FOR :

CHAW KHONG TECHNOLOGY CO., LTD.

NO. 29, WU-CHUANG 3RD RD.,

WU-KU INDUSTRIAL PARK, TAIPEI COUNTY,

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.

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TABLE OF CONTENTS

1. TEST REPORT CERTIFICATION.....	5
2. TEST STATEMENT	
2 . 1 TEST STATEMENT.....	6
3. DEPARTURE FROM DOCUMENT POLICIES, PROCEDURE OR SPECIFICATIONS, TEST STATEMENT.....	7
4. EUT MODIFICATIONS.....	9
5. CONDUCTED POWER LINE TEST	
5 . 1 TEST EQUIPMENT.....	10
5 . 2 TEST PROCEDURE.....	10
5 . 3 TEST SETUP.....	11
5 . 4 CONFIGURATION OF THE EUT.....	12-13
5 . 5 EUT OPERATING CONDITION.....	14
5 . 6 EMISSION LIMITS.....	14
5 . 7 EMISSION TEST RESULTS.....	15-18
6. RADIATED EMISSION TEST	
6 . 1 TEST EQUIPMENT.....	19
6 . 2 TEST PROCEDURE.....	20
6 . 3 TEST SETUP.....	20-21
6 . 4 CONFIGURATION OF THE EUT.....	22
6 . 5 EUT OPERATING CONDITION.....	22
6 . 6 EMISSION LIMITS.....	22
6 . 7 RADIATION EMISSION TEST RESULTS.....	23-35
7. BANDWIDTH	
7 . 1 LIMIT.....	36
7 . 2 RESULT.....	37-42
8. VERIFY CHANNELS AND FREQUENCIES.....	43

1. TEST REPORT CERTIFICATION**APPLICANT** : CHAW KHONG TECHNOLOGY CO., LTD.**ADDRESS** : NO. 29, WU-CHUANG 3RD RD.,
WU-KU INDUSTRIAL PARK,
TAIPEI COUNTY, TAIWAN, R.O.C.**EUT DESCRIPTION** : 900MHz Cordless Mini Phone(A) POWER SUPPLY : BASE BY ADAPTOR (120VAC / 60Hz)
HANDSET BY BATTERY (3.6V / 610mAh)(B) MODEL : MNP-310(C) FCC ID : OHGMNP-310**FINAL TEST DATE** : 02/22/2001**MEASUREMENT PROCEDURE USED :**

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

* ANSI C63.4 - 1992

* TEST PROCEDURE AND DATA ARE TRACEABLE TO NIST / USA.

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.

Alen Chou

TESTING ENGINEER : _____ DATE 2/22/2001

Alen Chou

Jesse Ho

SUPERVISOR : _____ DATE 2/22/2001

Jesse Ho

Johnson Ho

APPROVED BY : _____ DATE 2/22/2001

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:

Frequency Range : Base → 925.08 ~ 927.44 MHz
Handset → 902.58 ~ 904.94MHz
Support Channel : 60 channel

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

3. DEPARTURE FROM DOCUMENT POLICIES, PROCEDURE OR SPECIFICATIONS , THE STATEMENT

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.

CHAW KHONG TECHNOLOGY CO., LTD.

喬工科技股份有限公司

NO 29 WU CHUANG 3RD ROAD, WU KU INDUSTRIAL PARK TAIPEI COUNTY, TAIWAN

台北縣五股工業區五權三路 29 號

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WEB SITE : WWW.CKCORP.COM.TW

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 : OHGMNP-310 as listed in section 3.0 of modification to submitted by Spectrum Research and Testing Laboratory, Inc.

Respectfully,

<u>W-f</u>	<u>YH</u>	<u>manager / R&D</u>	<u>10/15/2000</u>
Last,	First	Position/ Title	Date

Effective Dates : November 12, 2000 to November 12, 2001.

4. EUT MODIFICATIONS

The following accessories were added to the EUT during testing :

- (1). To series a choke(R6H-6*10 2.5Ts) between L3 and U7.
- (2). Added a core(KCF-65-B) at power cable of adapter.
- (3). Replaced the C674, C675 instead of capacitor 1pF.

5. CONDUCTED POWER LINE TEST

5 . 1 TEST EQUIPMENT

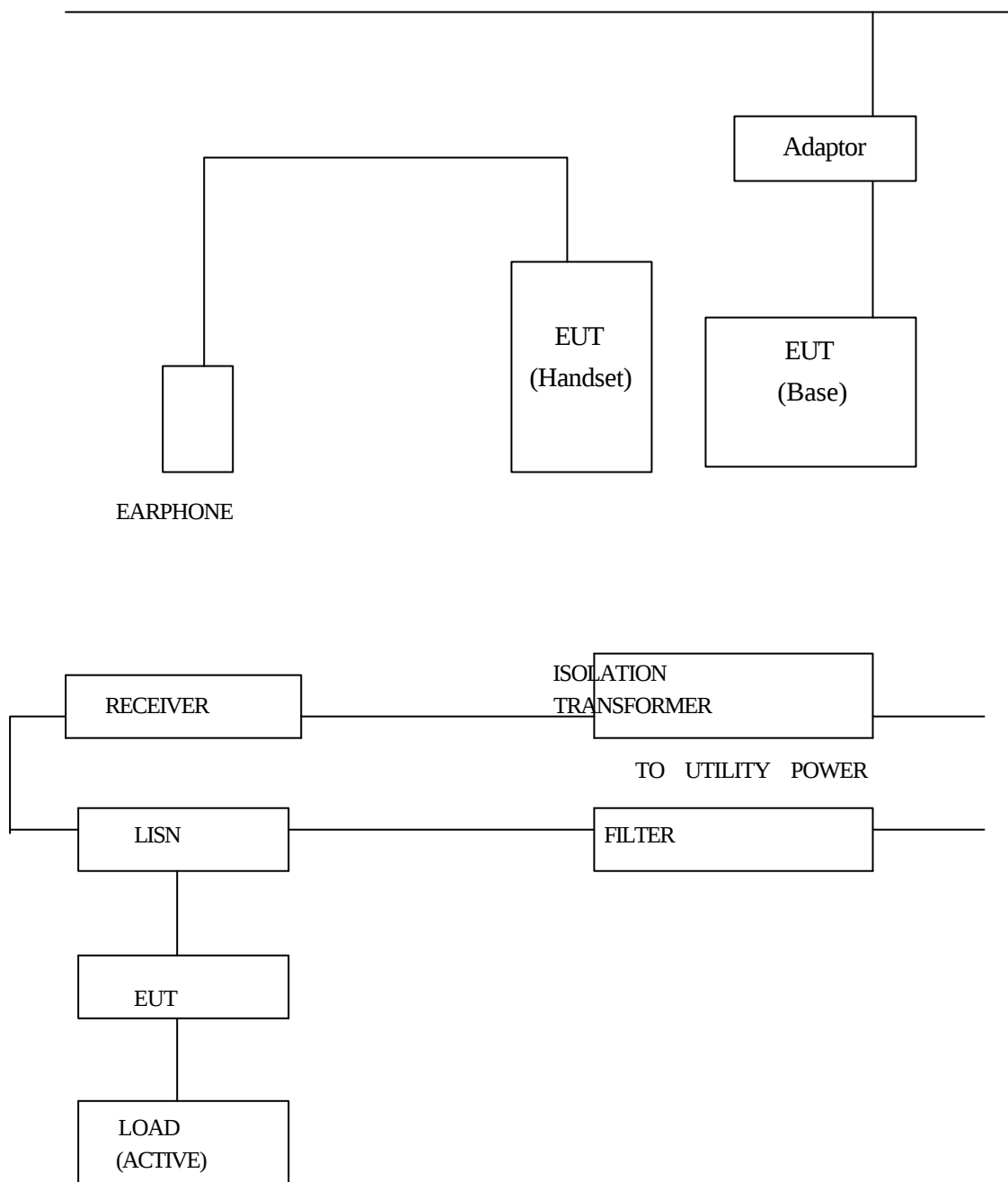
The following test equipment were used during the conducted power line test :

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	JULY 2000 ETC	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- R24-BNC/ 951315	JULY 2000 ETC	1Y	√
LISN	50uH, 50 ohm	SOLAR ELECTRONICS	9252-50- R24-BNC/ 951318	JULY 2000 ETC	1Y	√
SIGNAL GENERATOR	9 KHz TO 1080 MHz	ROHDE & SCHWARZ	SMY01/ 841104/019	MARCH 2000 ETC	1Y	√
POWER CONVERTER	50 TO 300 VAC 47 to 63Hz/ 50Hz/60Hz	AFC	AFC-2KBB F100030030	MARCH 2000 SRT	1Y	√

5 . 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.

5 . 3 TEST SETUP



5 . 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
900MHz Cordless Mini Phone	CHAW KHONG TECHNOLOGY CO., LTD.	MNP-310	OHGMNP-310

B. INTERNAL DEVICES

DEVICE	MANUFACTURER	MODEL #	FCCID / DoC
N/A			

C. PERIPHERALS

DEVICE	MANUFAC-TURER	MODEL # SERIAL #	FCCID / DoC	CABLE
ADAPTOR	HON-KWANG	D6300-02	N/A	1.8m unshielded power cord
EARPHONE	COMTEC WORLD	MH-200	N/A	1.2m unshielded data cable

- REMARK :

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

5 . 5 EUT OPERATING CONDITION

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

1. EUT power on.
2. Frequency Range: Base → 925.08 ~ 927.44 MHz
Handset → 902.58 ~ 904.94 MHz

5 . 6 CONDUCTED POWER LINE EMISSION LIMITS

FREQUENCY RANGE (MHz)	CLASS B
0 . 45 - 1.705	48.0 dBuV
1.705 - 30	48.0 dBuV

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

5 . 7 CONDUCTED POWER LINE TEST RESULTS

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

Temperature : 26 °C

Humidity : 59 %RH

FREQUENCY (MHz)	LINE 1 (dBuV)	LINE 2 (dBuV)	LIMIT (dBuV)
0.46	24.4	23.7	48.0
0.83	17.7	*	48.0
0.87	*	18.3	48.0
1.42	*	6.2	48.0
10.24	10.3	13.2	48.0
10.72	6.2	*	48.0

REMARKS : (1). * = measurement does not apply for this frequency
(2). uncertainty in conducted emission measured is <+/-2dB
(3). any departure from specification : N/A
(4). Charge mode

Alan Chow

SIGNED BY TESTING ENGINEER : _____

5 . 7 CONDUCTED POWER LINE TEST RESULTS

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

Temperature : 26 °CHumidity : 59 %RH

FREQUENCY (MHz)	LINE 1 (dBuV)	LINE 2 (dBuV)	LIMIT (dBuV)
0.45	25.5	24.2	48.0
0.77	*	15.6	48.0
0.86	18.4	*	48.0
1.42	*	7.1	48.0
3.57	3.6	*	48.0
10.24	13.0	7.3	48.0

REMARKS : (1). * = measurement does not apply for this frequency
(2). uncertainty in conducted emission measured is <+/-2dB
(3). any departure from specification : N/A
(4). Base channel 01

Alan Chow

SIGNED BY TESTING ENGINEER : _____

5 . 7 CONDUCTED POWER LINE TEST RESULTS

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

Temperature : 26 °CHumidity : 59 %RH

FREQUENCY (MHz)	LINE 1 (dBuV)	LINE 2 (dBuV)	LIMIT (dBuV)
0.47	22.8	*	48.0
0.50	*	15.9	48.0
0.83	17.7	*	48.0
0.84	*	18.0	48.0
1.42	*	8.5	48.0
10.24	12.4	7.2	48.0

REMARKS : (1). * = measurement does not apply for this frequency
(2). uncertainty in conducted emission measured is <+/-2dB
(3). any departure from specification : N/A
(4). Base channel 30

Alan Chiu

SIGNED BY TESTING ENGINEER : _____

5 . 7 CONDUCTED POWER LINE TEST RESULTS

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

Temperature : 26 °C

Humidity : 59 %RH

FREQUENCY (MHz)	LINE 1 (dBuV)	LINE 2 (dBuV)	LIMIT (dBuV)
0.45	25.1	*	48.0
0.46	*	23.1	48.0
0.86	18.0	*	48.0
0.89	*	16.3	48.0
1.42	9.0	8.9	48.0
10.24	12.5	7.2	48.0

REMARKS : (1). * = measurement does not apply for this frequency
(2). uncertainty in conducted emission measured is <+/- 2dB
(3). any departure from specification : N/A
(4). Base channel 60

Alan Chow

SIGNED BY TESTING ENGINEER : _____

6. RADIATED EMISSION TEST**6.1 TEST EQUIPMENT**

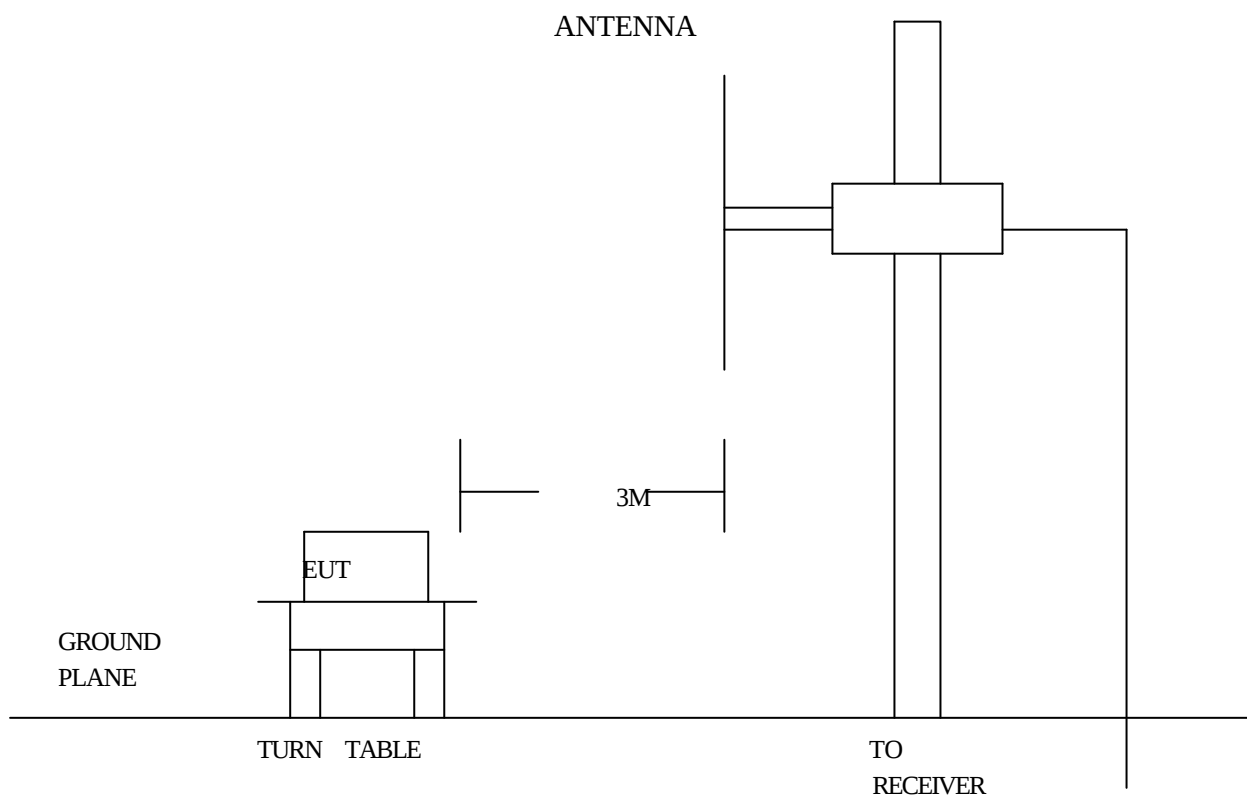
The following test equipment were used during the radiated emission test :

EQUIPMENT / FACILITIES	SPECIFICATIONS	MANUFACTURER	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	MARCH 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 2000 ETC	1Y	
SIGNAL GENERATOR	9 KHz TO 1080 MHz	ROHDE & SCHWARZ	SMY01/841104/019	MARCH 2000 ETC	1Y	√
DIPOLE ANTENNA	28 MHz TO 1000 MHz	EMCO	3121C/9003-534	MARCH 2000 SRT	1Y	
DIPOLE ANTENNA	28 MHz TO 1000 MHz	EMCO	3121C/9611-1239	AUG. 2000 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	AUG. 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 2000 ETC	1Y	
PRE-AMPLIFIER	0.1 MHz TO 1300 MHz	HP	8447D/2944A06412	JULY 2000 ETC	1Y	
HORN ANTENNA	1 GHz TO 18 GHz	EMCO	3115/9012-3619	JAN. 2001 ETC	1Y	

6 . 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 10 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.

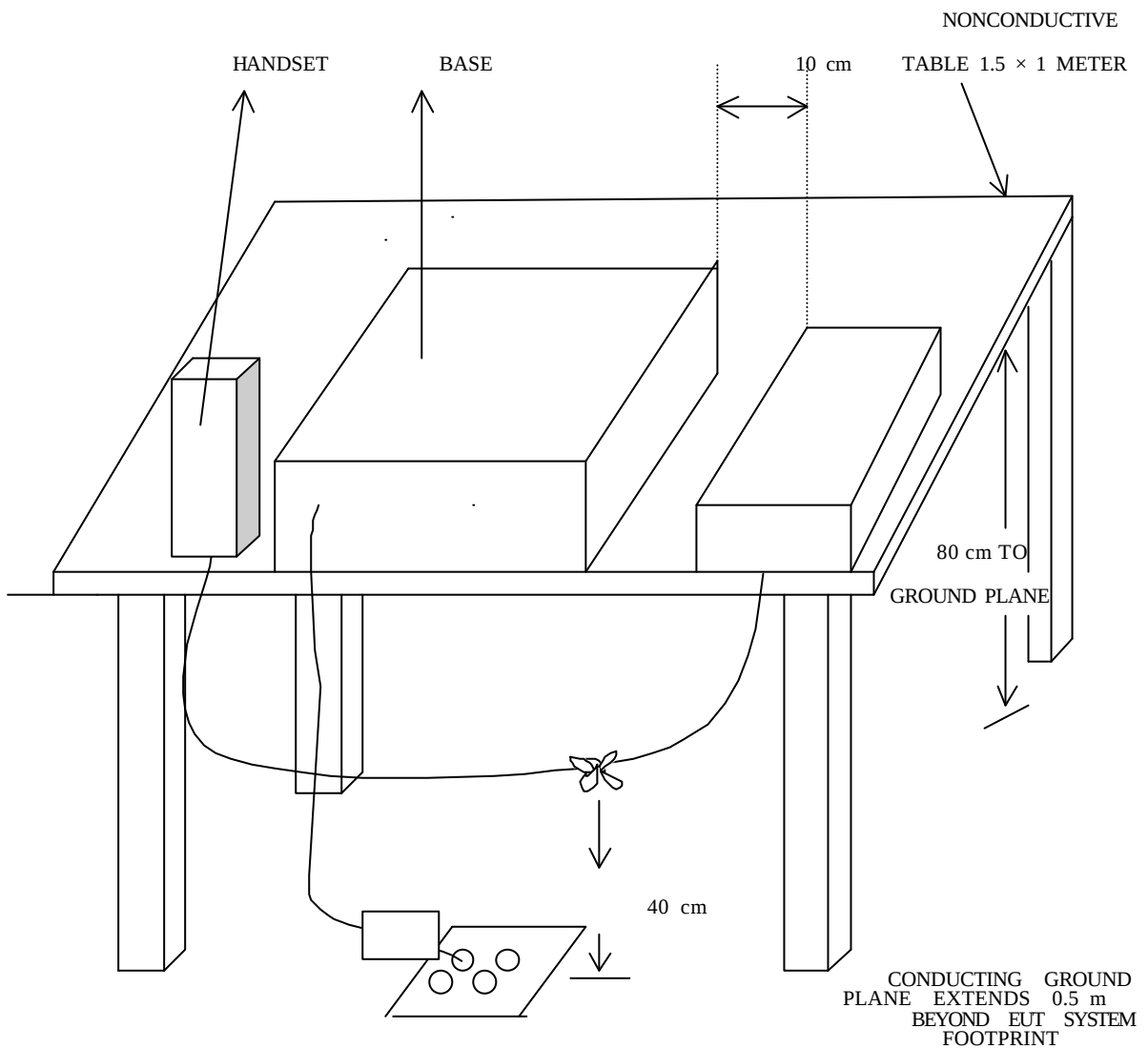
6 . 3 RADIATED TEST SET-UP



6 . 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



6 . 4 CONFIGURATION OF THE THE EUT

Same as section 5.4 of this report

6 . 5 EUT OPERATING CONDITION

Same as section 5.5 of this report.

6 . 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)	FIELDS STRENGTH (dBuV/m)
30 - 88	3	40.0
88 - 216	3	43.5
216 - 960	3	46.0
ABOVE 960	3	54.0

FUNDAMENTAL AND HARMONICS

FUNDAMENTAL FREQUENCY	FIELD STRENGTH OF FUNDAMENTAL (MILLIVOLTS/METER)	FIELD STRENGTH OF HARMONICS (MILLIVOLTS/METER)
902MHz - 928MHz	50	500
2400MHz - 2483.5MHz	50	500
5725MHz - 5875MHz	50	500
24.0GHz - 24.25GHz	250	2500

- NOTE** : 1. In the emission tables above, the tighter 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.

6 . 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 . Measurements were made at 3 meters.

Temperature : 18 °C

Humidity : 60 %RH

FREQ. (MHz)	FACTOR (dB)	ANT. FACTOR (dB/m)	READING (dBuV)		EMISSION (dBuV/m)		LIMITS (dBuV/m)
			HORIZ	VERT	HORIZ	VERT	
141.45	1.4	8.8	24.0	*	34.2	*	43.5
141.84	1.4	8.8	*	23.7	*	33.9	43.5
223.24	1.9	11.4	*	27.6	*	40.9	46.0
223.25	1.9	11.4	26.9	*	40.2	*	46.0
231.53	2.0	12.5	*	26.8	*	41.3	46.0
926.24	4.3	23.5	30.5	30.1	58.3	57.9	*

- 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

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

 (6). Base channel 30

SIGNED BY TESTING ENGINEER : Alan Chua

6 . 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 . Measurements were made at 3 meters.

Temperature : 18 °C

Humidity : 60 %RH

FREQ. (MHz)	FACTOR (dB)	ANT. FACTOR (dB/m)	READING (dBuV)		EMISSION (dBuV/m)		LIMITS (dBuV/m)
			HORIZ	VERT	HORIZ	VERT	
141.42	1.4	8.8	23.8	*	34.0	*	43.5
141.84	1.4	8.8	*	24.3	*	34.5	43.5
223.24	1.9	11.4	26.7	*	40.0	*	46.0
223.26	1.9	11.4	*	27.4	*	40.7	46.0
231.94	2.0	12.5	27.5	*	42.0	*	46.0
927.44	4.3	23.5	30.4	30.1	58.2	57.9	*

- 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

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

 (6). Base channel 60

SIGNED BY TESTING ENGINEER : _____

6 . 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 . Measurements were made at 3 meters.

Temperature : 18 °C

Humidity : 60 %RH

FREQ. (MHz)	FACTOR (dB)	ANT. FACTOR (dB/m)	READING (dBuV)		EMISSION (dBuV/m)		LIMITS (dBuV/m)
			HORIZ	VERT	HORIZ	VERT	
180.32	1.7	10.5	22.1	22.4	34.3	34.6	43.5
451.59	2.8	16.9	17.8	17.5	37.5	37.2	46.0
703.22	3.7	22.4	12.4	12.6	38.5	38.7	46.0
894.44	4.2	22.7	14.2	13.8	41.1	40.7	46.0
902.58	4.2	23.5	41.3	40.9	69.0	68.6	*
911.04	4.2	23.5	13.9	14.2	41.6	41.9	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

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

 (6). Handset channel 01

SIGNED BY TESTING ENGINEER : _____

6 . 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 . Measurements were made at 3 meters.

Temperature : 18 °CHumidity : 60 %RH

FREQ. (MHz)	FACTOR (dB)	ANT. FACTOR (dB/m)	READING (dBuV)		EMISSION (dBuV/m)		LIMITS (dBuV/m)
			HORIZ	VERT	HORIZ	VERT	
180.32	1.7	10.5	21.8	22.2	34.0	34.4	43.5
450.99	2.8	16.9	18.2	17.9	37.9	37.6	46.0
703.18	3.7	22.4	12.3	12.2	38.4	38.3	46.0
896.22	4.2	22.7	14.8	14.0	41.7	40.9	46.0
903.74	4.2	23.5	40.5	40.2	68.2	67.9	*
912.02	4.2	23.5	13.2	13.5	40.9	41.2	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

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

 (6). Handset channel 30

SIGNED BY TESTING ENGINEER : Alan Chua

6 . 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 . Measurements were made at 3 meters.

Temperature : 18 °C

Humidity : 60 %RH

FREQ. (MHz)	FACTOR (dB)	ANT. FACTOR (dB/m)	READING (dBuV)		EMISSION (dBuV/m)		LIMITS (dBuV/m)
			HORIZ	VERT	HORIZ	VERT	
180.32	1.7	10.5	22.0	22.1	34.2	34.3	43.5
450.99	2.8	16.9	17.9	17.4	37.6	37.1	46.0
703.18	3.7	22.4	12.7	12.5	38.8	38.6	46.0
898.06	4.2	22.7	15.1	14.5	42.0	41.4	46.0
904.94	4.2	23.5	41.2	40.7	68.9	68.4	*
913.52	4.2	23.5	13.0	13.3	40.7	41.0	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

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

 (6). Handset channel 6

SIGNED BY TESTING ENGINEER : Alvin Chua

6 . 7 RADIATED EMISSION TEST RESULTS

The frequency spectrum from 1 GHz to 10 GHz was investigated. The measurements above 1 GHz with a resolution bandwidth of 1 MHz are peak reading at a distance of 3 meters.

Temperature : 18 °C

Humidity : 60 %RH

FREQ. (GHz)	FACTOR (dB)	ANT. FACTOR (dB/m)	READING (dBuV)		EMISSION (dBuV/m)		LIMITS (dBuV/m)
			HORIZ	VERT	HORIZ	VERT	
1850.16	4.01	26.3	11.82	11.53	42.13	41.84	54.0
2775.24	5.26	29.7	5.95	4.51	40.91	39.47	54.0
3700.32	6.13	32.4	*	*	*	*	54.0
4625.40	6.97	33.5	*	*	*	*	54.0
5550.48	7.75	34.1	*	*	*	*	54.0
6475.56	8.48	34.7	*	*	*	*	54.0

- 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

$$20 \log (\text{emission}) \text{ uV/m} = \text{Factor(dB)} + \text{Ant. factor(dB/m)} - \text{Pre-Amp.(dB)} + \text{Reading(dBuV)}$$

 (6). Base channel 01

SIGNED BY TESTING ENGINEER : _____

6 . 7 RADIATED EMISSION TEST RESULTS

The frequency spectrum from 1 GHz to 10 GHz was investigated. The measurements above 1 GHz with a resolution bandwidth of 1 MHz are peak reading at a distance of 3 meters.

Temperature : 18 °C

Humidity : 60 %RH

FREQ. (GHz)	FACTOR (dB)	ANT. FACTOR (dB/m)	READING (dBuV)		EMISSION (dBuV/m)		LIMITS (dBuV/m)
			HORIZ	VERT	HORIZ	VERT	
1852.48	4.01	26.3	11.84	11.72	42.15	42.03	54.0
2778.72	5.26	29.7	5.62	4.36	40.58	39.22	54.0
3704.96	6.13	32.4	*	*	*	*	54.0
4631.20	6.97	33.5	*	*	*	*	54.0
5557.44	7.75	34.1	*	*	*	*	54.0
6483.68	8.48	34.7	*	*	*	*	54.0

- 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

$$20 \log (\text{emission}) \text{ uV/m} = \text{Factor(dB)} + \text{Ant. factor(dB/m)} - \text{Pre-Amp.(dB)} + \text{Reading(dBuV)}$$

 (6). Base channel 30

SIGNED BY TESTING ENGINEER : _____

6 . 7 RADIATED EMISSION TEST RESULTS

The frequency spectrum from 1 GHz to 10 GHz was investigated. The measurements above 1 GHz with a resolution bandwidth of 1 MHz are peak reading at a distance of 3 meters.

Temperature : 18 °C

Humidity : 60 %RH

FREQ. (GHz)	FACTOR (dB)	ANT. FACTOR (dB/m)	READING (dBuV)		EMISSION (dBuV/m)		LIMITS (dBuV/m)
			HORIZ	VERT	HORIZ	VERT	
1854.88	4.01	26.3	11.73	11.20	42.04	41.51	54.0
2782.32	5.26	29.7	6.05	4.62	41.01	39.58	54.0
3709.76	6.13	32.4	*	*	*	*	54.0
4637.20	6.97	33.5	*	*	*	*	54.0
5564.64	7.75	34.1	*	*	*	*	54.0
6492.08	8.48	34.7	*	*	*	*	54.0

- 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

$$20 \log (\text{emission}) \text{ uV/m} = \text{Factor(dB)} + \text{Ant. factor(dB/m)} - \text{Pre-Amp.(dB)} + \text{Reading(dBuV)}$$

 (6). Base channel 60

SIGNED BY TESTING ENGINEER : _____

6 . 7 RADIATED EMISSION TEST RESULTS

The frequency spectrum from 1 GHz to 10 GHz was investigated. The measurements above 1 GHz with a resolution bandwidth of 1 MHz are peak reading at a distance of 3 meters.

Temperature : 18 °C

Humidity : 60 %RH

FREQ. (GHz)	FACTOR (dB)	ANT. FACTOR (dB/m)	READING (dBuV)		EMISSION (dBuV/m)		LIMITS (dBuV/m)
			HORIZ	VERT	HORIZ	VERT	
1805.16	4.01	26.3	19.34	17.14	49.68	47.45	54.0
2707.74	5.26	29.7	10.55	10.05	45.51	45.01	54.0
3610.32	6.13	32.4	2.82	1.68	41.35	40.21	54.0
4512.90	6.97	33.5	*	*	*	*	54.0
5415.48	7.75	34.1	*	*	*	*	54.0
6318.06	8.48	34.7	*	*	*	*	54.0

- 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

$$20 \log (\text{emission}) \text{ uV/m} = \text{Factor(dB)} + \text{Ant. factor(dB/m)} - \text{Pre-Amp.(dB)} + \text{Reading(dBuV)}$$

 (6). Handset channel 01

SIGNED BY TESTING ENGINEER : _____

6 . 7 RADIATED EMISSION TEST RESULTS

The frequency spectrum from 1 GHz to 10 GHz was investigated. The measurements above 1 GHz with a resolution bandwidth of 1 MHz are peak reading at a distance of 3 meters.

Temperature : 18 °C

Humidity : 60 %RH

FREQ. (GHz)	FACTOR (dB)	ANT. FACTOR (dB/m)	READING (dBuV)		EMISSION (dBuV/m)		LIMITS (dBuV/m)
			HORIZ	VERT	HORIZ	VERT	
1807.48	4.01	26.3	18.43	16.92	48.74	47.23	54.0
2711.22	5.26	29.7	9.95	9.50	44.91	44.46	54.0
3614.96	6.13	32.4	3.3	2.52	41.83	41.05	54.0
4518.70	6.97	33.5	*	*	*	*	54.0
5422.44	7.75	34.1	*	*	*	*	54.0
6326.18	8.48	34.7	*	*	*	*	54.0

- 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

$$20 \log (\text{emission}) \text{ uV/m} = \text{Factor(dB)} + \text{Ant. factor(dB/m)} - \text{Pre-Amp.(dB)} + \text{Reading(dBuV)}$$

 (6). Handset channel 30

SIGNED BY TESTING ENGINEER : Alon Chou

6 . 7 RADIATED EMISSION TEST RESULTS

The frequency spectrum from 1 GHz to 10 GHz was investigated. The measurements above 1 GHz with a resolution bandwidth of 1 MHz are peak reading at a distance of 3 meters.

Temperature : 18 °C

Humidity : 60 %RH

FREQ. (GHz)	FACTOR (dB)	ANT. FACTOR (dB/m)	READING (dBuV)		EMISSION (dBuV/m)		LIMITS (dBuV/m)
			HORIZ	VERT	HORIZ	VERT	
1809.88	4.01	26.3	18.28	18.06	48.59	48.37	54.0
2714.82	5.26	29.7	10.2	10.36	45.16	45.32	54.0
3619.76	6.13	32.4	2.58	3.14	41.11	41.67	54.0
4524.70	6.97	33.5	*	*	*	*	54.0
5429.64	7.75	34.1	*	*	*	*	54.0
6334.58	8.48	34.7	*	*	*	*	54.0

- 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

$$20 \log (\text{emission}) \text{ uV/m} = \text{Factor(dB)} + \text{Ant. factor(dB/m)} - \text{Pre-Amp.(dB)} + \text{Reading(dBuV)}$$

 (6). Handset channel 60

SIGNED BY TESTING ENGINEER : _____

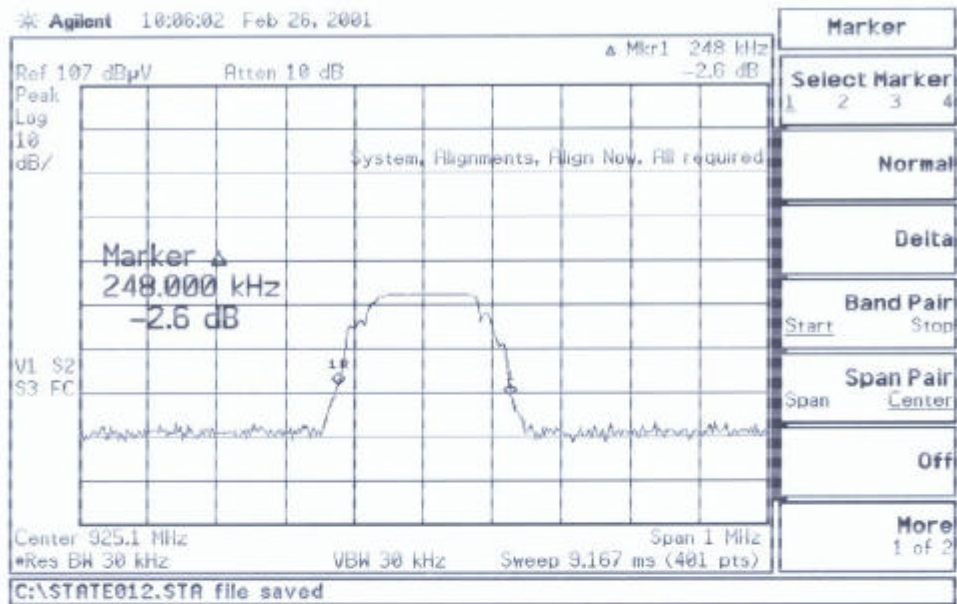
7 BANDWIDTH

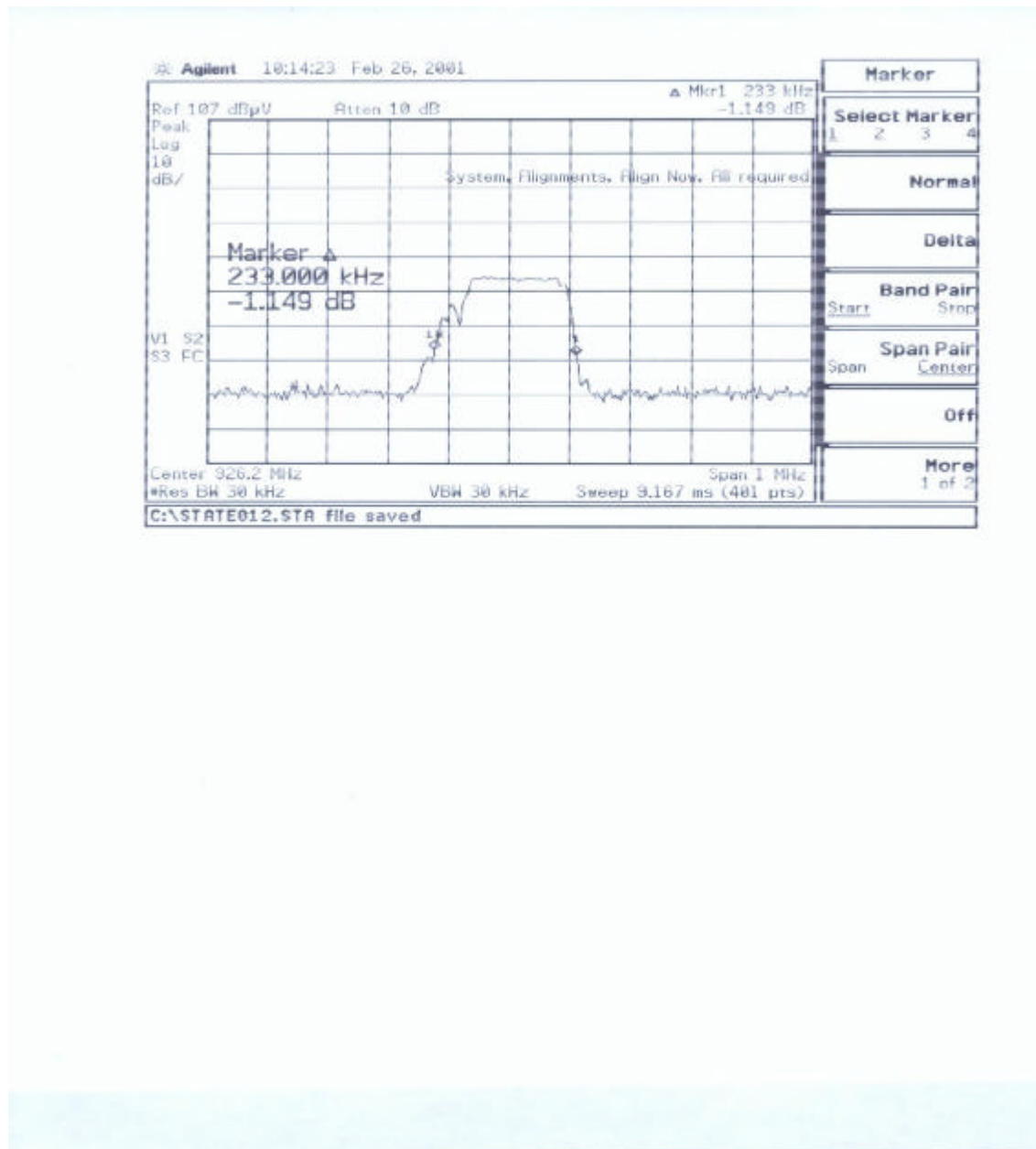
7.1 Limit

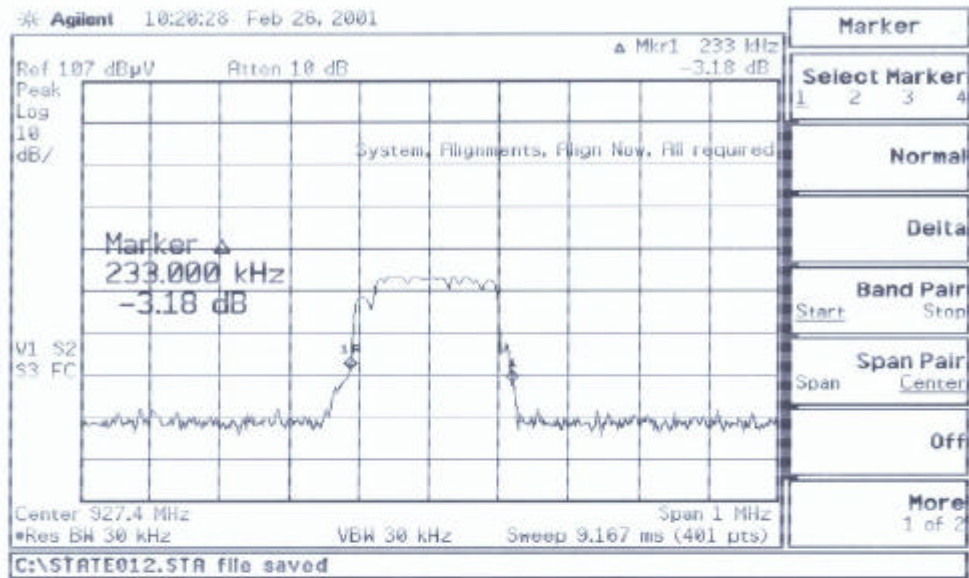
The emission shall be no wider than 0.5% of the center frequency.
Bandwidth is de-termined at the points 20dB down from the modulated carrier.

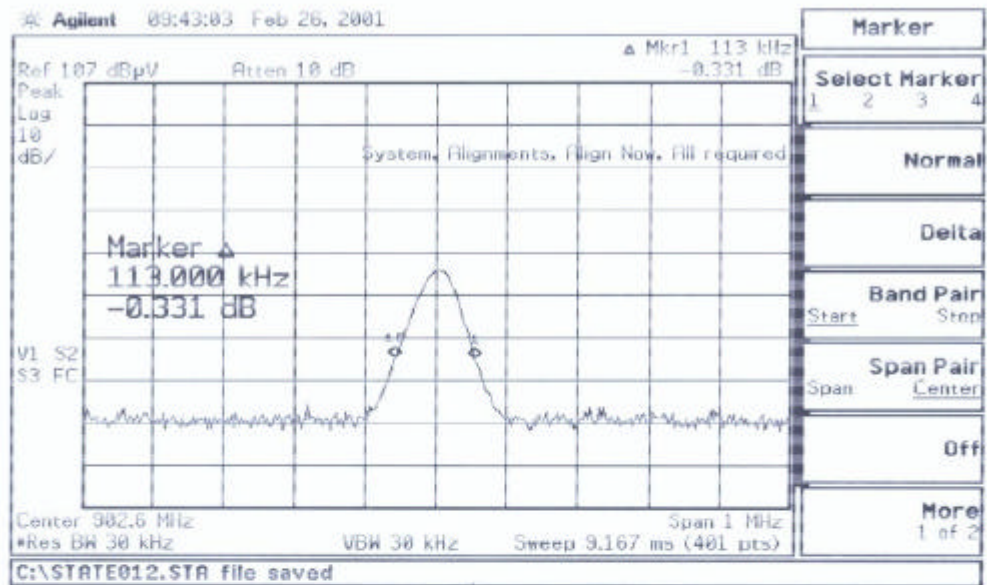
7.2 Test Result

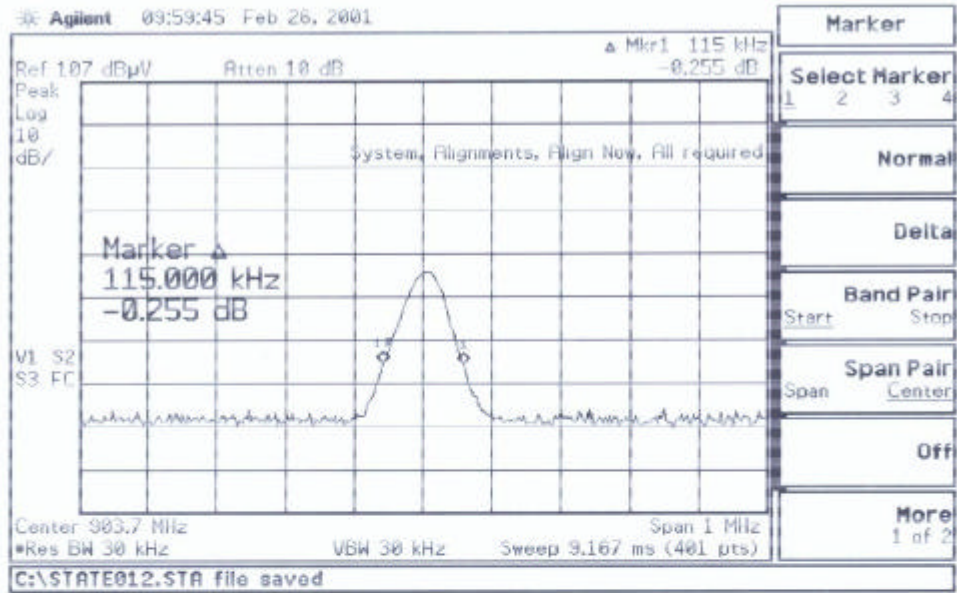
Please see attached plotter.

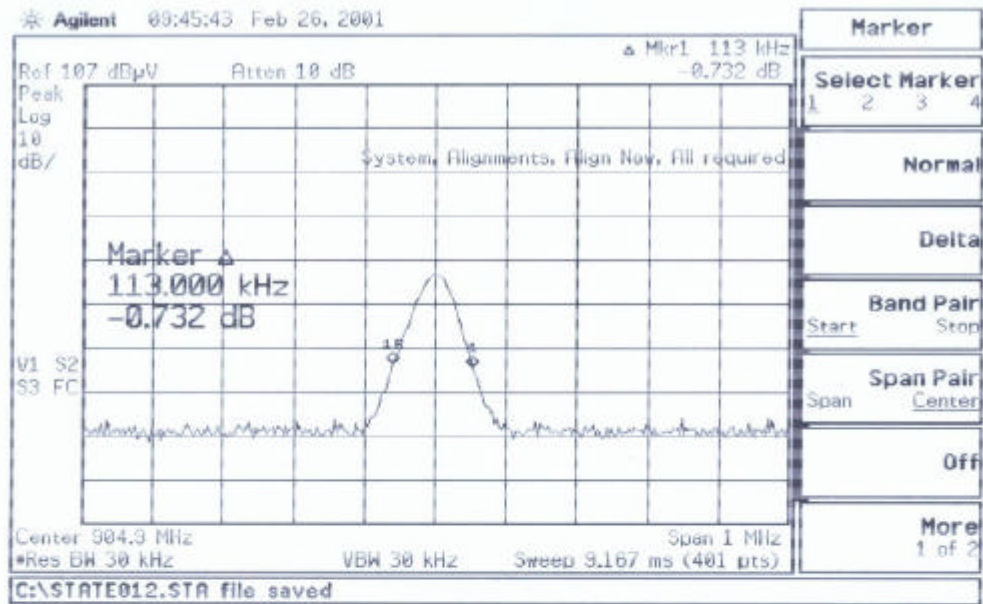
***Base channel 01**

***Base channel 30**

***Base channel 60**

***Handset channel 01**

***Handset channel 30**

***Handset channel 60**

8. VERIFY CHANNELS AND FREQUENCIES

Verify the Frequency Pairs

Channel	Handset (MHz)	Base (MHz)	Channel	Handset (MHz)	Base (MHz)
1	902.580	925.080	31	903.780	926.280
2	902.620	925.120	32	903.820	926.320
3	902.660	925.160	33	903.860	926.360
4	902.700	925.200	34	903.900	926.400
5	902.740	925.240	35	903.940	926.440
6	902.780	925.280	36	903.980	926.480
7	902.820	925.320	37	904.020	926.520
8	902.860	925.360	38	904.060	926.560
9	902.900	925.400	39	904.100	926.600
10	902.940	925.440	40	904.140	926.640
11	902.980	925.480	41	904.180	926.680
12	903.020	925.520	42	904.220	926.720
13	903.060	925.560	43	904.260	926.760
14	903.100	925.600	44	904.300	926.800
15	903.140	925.640	45	904.340	926.840
16	903.180	925.680	46	904.380	926.880
17	903.220	925.720	47	904.420	926.920
18	903.260	925.760	48	904.460	926.960
19	903.300	925.800	49	904.500	927.000
20	903.340	925.840	50	904.540	927.040
21	903.380	925.880	51	904.580	927.080
22	903.420	925.920	52	904.620	927.120
23	903.460	925.960	53	904.660	927.160
24	903.500	926.000	54	904.700	927.200
25	903.540	926.040	55	904.740	927.240
26	903.580	926.080	56	904.780	927.280
27	903.620	926.120	57	904.820	927.320
28	903.660	926.160	58	904.860	927.360
29	903.700	926.200	59	904.900	927.400
30	903.740	926.240	60	904.940	927.440

Note : This is for sure that all frequencies are in 902 MHz to 928 MHz.

Section 15.214(d) The security code is set automatic:

Every time when you place the handset in the base, your cordless will randomly select one of 65,530 possible security codes.