ETC Report No.: ET93S-11-101-01

Sheet 1 of 98 Sheets
FCC ID: QWTBAP-100



# **CONFORMANCE TEST REPORT FOR FCC 47 CFR, Part 15 Subpart B & C**

Report No.: ET93S-11-101-01

Client: Chung-Hsin Electric & Machinery Mfg. Corp.

Product: Bluetooth Pan Access Point

Model: BAP-100

FCC ID: QWTBAP-100

Manufacturer/supplier: Chung-Hsin Electric & Machinery Mfg. Corp.

Date test item received: 2004/11/11

Date test campaign completed: 2004/12/27

Date of issue: 2004/12/31

The test result only corresponds to the tested sample. It is not permitted to copy this report, in part or in full, without the permission of the test laboratory.

Total number of pages of this test report: 98 pages

Total number of pages of photos: External photos 3 pages

Internal photos 3 pages

Setup photos 2 pages

Test Engineer

Checked By

Approved By

Mark

Joe Hsieh

Tsung-Ching Lin

ELECTRONICS TESTING CENTER, TAIWAN TEL: (03) 3276170~4

NO.8, LANE 29, WEN-MING RD., INT: +886-3-3276170~4

LO-SHAN TSUN, KUI-SHAN HSIANG, FAX: (03) 3276188

TAOYUAN HSIEN 333 INT: +886-3-3276188

TAIWAN, R.O.C.



ETC Report No.: ET93S-11-101-01

Sheet 2 of 98 Sheets
FCC ID: QWTBAP-100

Client : Chung-Hsin Electric & Machinery Mfg. Corp.

Address : No. 25, Wen-Te Rd., Lo-Shan Village, Kwei Shan Hsiang, Taoyuan Hsien, Taiwan,

R.O.C.

Manufacturer : Chung-Hsin Electric & Machinery Mfg. Corp.

Address : No. 25, Wen-Te Rd., Lo-Shan Village, Kwei Shan Hsiang, Taoyuan Hsien, Taiwan,

R.O.C.

EUT : Bluetooth Pan Access Point

Trade name : Mobia

Model No. : BAP-100

Power Source : Adapter Model No.: RHH-050100-1

Input: 100-240Vac, 50/60Hz, 0.15A

Output: DC 5Vdc, 1A

Regulations applied : FCC 47 CFR, Part 15 Subpart B & C (2003)

The testing described in this report has been carried out to the best of our knowledge and ability, and our responsibility is limited to the exercise of reasonable care. This certification is not intended to believe the sellers from their legal and/or contractual obligations.

The compliance test is only certified for the test equipment and the results of the testing report relate only to the item tested. The compliance test of this report was conducted in accordance with the appropriate standards. It's not intention to assure the quality and performance of the product. This report shall not be reproduced except in full, without the approval of ETC. This report must not be used by the client to claim product endorsement by NVLAP or any agency of the U.S. Government.

Laboratory Introduction: Electronics Testing Center, Taiwan is recognized, filed and mutual recognition arrangement as following:

- ISO9001: TüV Product Service
- 2 ISO/IEC 17025: BSMI, CNLA, DGT, NVLAP, CCIBLAC, UL, Compliance
- 3 Filing: FCC, Industry Canada, VCCI
- <sup>3</sup> MRA: Australia, Hong Kong, New Zealand, Singapore, USA, Japan, Korea, China, APLAC through CNLA



NVLAP Lab Code 200133-0

Table of Contents	Page
1 GENERAL INFORMATION	5
1.1 Product Description	5
1.2 Characteristics of Device	5
1.3 Test Methodology	5
1.4 Modifiction List of EUT	5
1.5 Test Facility	5
2 PROVISIONS APPLICABLE	6
2.1 Definition	6
2.2 Requirement for Compliance	7
2.3 Restricted Bands of Operation	9
2.4 Labeling Requirement	9
2.5 User Information	10
3. SYSTEM TEST CONFIGURATION	11
3.1 Justification	11
3.2 Devices for Tested System	11
4 RADIATED EMISSION MEASUREMENT	12
4.1 Applicable Standard	
4.2 Measurement Procedure	12
4.3 Measuring Instrument	14
4.4 Radiated Emission Data	
4.5 Field Strength Calculation	52
5 CONDUCTED EMISSION MEASUREMENT	53
5.1 Standard Applicable	53
5.2 Measurement Procedure	53
5.3 Conducted Emission Data	54
5.4 Result Data Calculation	
5.4 Result Data Calculation	
5.5 Conducted Measurement Equipment	61
6 ANTENNA REQUIREMENT	62
6.1 Standard Applicable	
6.2 Antenna Construction and Directional Gain	62
7 20DB EMISSION BANDWIDTH MEASUREMENT	63
7.1 Standard Applicable	63
7.2 Measurement Procedure	63

7.3 Measurement Equipment	63
7.4 Measurement Data	64
8 OUTPUT POWER MEASUREMENT	68
8.1 Standard Applicable	68
8.2 Measurement Procedure	68
8.3 Measurement Equipment	68
8.4 Measurement Data	69
9 OUT-OF-BAND RF CONDUCTED SPURIOUS EMISSION MEASUREMENT	73
9.1 Standard Applicable	73
9.2 Measurement Procedure	73
9.3 Measurement Equipment	73
9.4 Measurement Data	74
10 NUMBER OF HOPPING CHANNELS	80
10.1 Standard Applicable	80
10.2 Measurement Procedure	80
10.3 Measurement Equipment	80
10.4 Measurement Data	80
11 HOPPING CHANNEL CARRIER FREQUENCY SEPARATED	82
11.1 Standard Applicable	82
11.2 Measurement Procedure	82
11.3 Measurement Equipment	82
11.4 Measurement Data	83
12 POWER SPECTRAL DENSITY	87
12.1 Standard Applicable	87
12.2 Measurement Procedure	87
12.3 Measurement Equipment	87
12.4 Measurement Data	88
13 DWELL TIME	92
13.1 Standard Applicable	92
13.2 Measurement Procedure	92
13.3 Measurement Equipment	92
13.4 Measurement Data	92

ETC Report No.: ET93S-11-101-01

Sheet 5 of 98 Sheets
FCC ID: QWTBAP-100

### 1 GENERAL INFORMATION

# 1.1 Product Description

a) Type of EUT : Bluetooth Pan Access Point

b) Trade Name : Mobia c) Model No. : BAP-100

d) Power Supply : Adapter Model No.: RHH-050/00-1

Input: 100-240Vac, 50/60Hz, 0.15A

Output: DC 5Vdc, 1A

### 1.2 Characteristics of Device

The EUT is a Bluetooth Pan Access Point on the Bluetooth technology. Bluetooth is a short-range radio link intended to be a cable replacement between portable or fixed electronic devices. Bluetooth operates in the unlicensed ISM Band at 2.4GHz. In this band, 79 RF channels spaced 1MHz apart are defined. The rated output power is 13.34 dBm (21.58 mW).

# 1.3 Test Methodology

All testing were performed according to the procedures in ANSI C63.4 and FCC CFR 47 Part 2 and Part 15.

### 1.4 Modifiction List of EUT

N/A

### 1.5 Test Facility

The semi-anechoic chamber and conducted measurement facility used to collect the radiated and conducted data are located inside the Building at No.8, Lane 29, Wen-ming Road, Lo-shan Tsun, Kweishan Hsiang, Taoyuan, Taiwan, R.O.C.

This site has been accreditation as a FCC filing site.

ETC Report No.: ET93S-11-101-01

Sheet 6 of 98 Sheets
FCC ID: QWTBAP-100

### 2 PROVISIONS APPLICABLE

### 2.1 Definition

#### **Unintentional radiator:**

A device that intentionally generates and radio frequency energy for use within the device, or that sends radio frequency signals by conduction to associated equipment via connecting wiring, but which is not intended to emit RF energy by radiation or induction.

### Class A Digital Device:

A digital device which is marketed for use in commercial or business environment; exclusive of a device which is market for use by the general public, or which is intended to be used in the home.

### Class B Digital Device:

A digital device which is marketed for use in a residential environment notwithstanding use in a commercial, business of industrial environment. Example of such devices that are marketed for the general public.

Note: A manufacturer may also qualify a device intended to be marketed in a commercial, business, or industrial environment as a Class B digital device, and in fact is encouraged to do so, provided the device complies with the technical specifications for a Class B Digital Device. In the event that a particular type of device has been found to repeatedly cause harmful interference to radio communications, the Commission may classify such a digital device as a Class B Digital Device, Regardless of its intended use.

### **Intentional radiator:**

A device that intentionally generates and emits radio frequency energy by radiation or induction.

ETC Report No.: ET93S-11-101-01

Sheet 7 of 98 Sheets
FCC ID: QWTBAP-100

# 2.2 Requirement for Compliance

### (1) Conducted Emission Requirement

For unintentional device, according to §15.107(a) Line Conducted Emission Limits is as following:

Frequency MHz	Quasi Peak dB μ V	Average dB μ V
0.15 - 0.5	66-56*	56-46*
0.5 - 5.0	56	46
5.0 - 30.0	60	50

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

For intentional device, according to §15.207(a) Line Conducted Emission Limits is same as above table.

### (2) Radiated Emission Requirement

For unintentional device, according to §15.109(a), except for Class A digital devices, the field strength of radiated emissions from unintentional radiators at a distance of 3 meters shall not exceed the following values:

Frequency MHz	Distance Meters	Radiated dB μ V/m	Radiated μV/m
30 - 88	3	40.0	100
88 - 216	3	43.5	150
216 - 960	3	46.0	200
above 960	3	54.0	500

For intentional device, according to §15.209(a), the general requirement of field strength of radiated emissions from intentional radiators at a distance of 3 meters shall not exceed the above table.

### (3) Antenna Requirement

For intentional device, according to §15.203, an intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device.

ETC Report No.: ET93S-11-101-01

Sheet 8 of 98 Sheets
FCC ID: QWTBAP-100

### (4) 20dB Bandwidth Requirement

For frequency hopping systems, according to 15.247(a)(1), hopping channel carrier frequencies seperated by a minimum of 25kHz or the 20dB bandwidth of hopping channel, whichever is greater.

### (5) Output Power Requirement

For frequency hopping systems, according to 15.247(1), operating in the 2400-2483.5MHz band employing at least 75 hopping channels. The maximum peak output power of the transmitter shall not exceed 1 Watt. If transmitting antennas of directional gain greater than 6 dBi are used, the power shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

# (6) 100 kHz Bandwidth of Frequency Band Edges Requirement

According to 15.247(c), if any 100 kHz bandwidth outside these frequency bands, the radio frequency power that is produced by the modulation products of the spreading sequence, the information sequence and the carrier frequency shall be either at least 20 dB below that in any 100 kHz bandwidth within the band that contains the highest level of the desired power or shall not exceed the general levels specified in §15.209(a), whichever results in the lesser attenuation.

### (7) Number of Hopping Channels

According to 15.247(b)(1), for frequency hopping systems, operating in the 2400-2483.5MHz band employing at least 75 hopping channels.

### (8) Channel Carrier Frequencies Seperation

According to 15.247(a)(1)(iii), the frequency hopping systems shall have hopping channel carrier frequencies seperated by minimum of 25kHz or the 20dB bandwidth of hopping channel, whichever is greater.

### (9) Dwell Time

According to 15.247(a)(1)(iii), frequency hopping system in the 2400-2483.5MHz band employing at least 15 non-overlapping channels. The average time of occupancy on any channel shall not be greater than 0.4 seconds within a period of 0.4 second multiplied by the number of hopping channels employed.

### (10) Power Spectral Density

According to 15.247(d), for bluetooth device, the peak power spectral density conducted from the intentional radiator to the antenna shall not be greater them 8dBm in any 3kHz band during any time interral of continuous transmission.

ETC Report No.: ET93S-11-101-01

Sheet 9 of 98 Sheets
FCC ID: QWTBAP-100

# 2.3 Restricted Bands of Operation

Only spurious emissions are permitted in any of the frequency bands listed below:

MHz	MHz	MHz	GHz
0.090 - 0.110	16.42-16.423	399.9-410	4.5-5.25
0.495 - 0.505 **	16.69475 - 16.69525	608-614	5.35-5.46
2.1735 - 2.1905	16.80425 - 16.80475	960-1240	7.25-7.75
4.125-4.128	25.5-25.67	1300-1427	8.025-8.5
4.17725-4.17775	37.5-38.25	1435-1626.5	9.0-9.2
4.20725-4.20775	73-74.6	1645.5-1646.5	9.3-9.5
6.215-6.218	74.8-75.2	1660-1710	10.6-12.7
6.26775-6.26825	108-121.94	1718.8-1722.2	13.25-13.4
6.31175-6.31225	123-138	2200-2300	14.47-14.5
8.291-8.294	149.9-150.05	2310-2390	15.35-16.2
8.362-8.366	156.52475 - 156.52525	2483.5-2500	17.7-21.4
8.37625-8.38675	156.7-156.9	2655-2900	22.01-23.12
8.41425-8.41475	162.0125-167.17	3260-3267	23.6-24.0
12.29-12.293	167.72-173.2	3332-3339	31.2-31.8
12.51975-12.52025	240-285	3345.8-3358	36.43-36.5
12.57675-12.57725	322-335.4	3600-4400	Above 38.6
13.36-13.41			

<sup>\*\*:</sup> Until February 1, 1999, this restricted band shall be 0.490-0.510 MHz

# 2.4 Labeling Requirement

The device shall bear the following statement in a conspicuous location on the device :

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

ETC Report No. : ET93S-11-101-01

Sheet 10 of 98 Sheets FCC ID: QWTBAP-100

### 2.5 User Information

The users manual or instruction manual for an intentional or unintentional radiator shall caution the user that changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

For a Class B digital device or peripheral, the instructions furnished the user shall include the following or similar statement, placed in a prominent location in the text of the manual.

The Federal Communications Commission Radio Frequency Interference Statement includes the following paragraph.

This equipment has been tested and found to comply with the limits for a Class B Digital Device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation.

This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instruction may cause harmful interference to radio communication. However, there is no guarantee that interference will not occur in a particular installation.

If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- -- Reorient or relocate the receiving antenna.
- -- Increase the separation between the equipment and receiver.
- -- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- -- Consult the dealer or an experienced radio / TV technician for help.

### 3. SYSTEM TEST CONFIGURATION

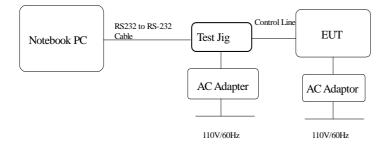
### 3.1 Justification

For the purposes of this test report ancillary equipment is defined as equipment which is used in conjunction with the EUT to provide operational and control features to the EUT during the test. Notebook PC was used to control the RF channel under the hightest, middle and lowest frequency and transmit the maximum RF power. Customer would not use it. But never the less ancillary equipment can influence the test results..

# 3.2 Devices for Tested System

Device	Manufacture	Model	Cable Description
*Bluetooth Pan Access Point	Chung-Hsin Electric & Machinery Mfg. Corp.	BAP-100	1.8m, Unshielded Line / Adapter
Portable Pen Terminal	Chung-Hsin Electric & Machinery Mfg. Corp.	PPT-120	
Notebook PC	ASUS	L7245	3.3m, Unshielded Network Cable
Test Jig			1.8m, Unshielded Signal Line 0.5m, Unshielded Signal Line 1.8m, Unshielded Power Line / Adapter

- 1. Remark "\*" means equipment under test.
- 2. After the control is completed every time, the Notebook PC and Test Jig will move out during the test.



ETC Report No.: ET93S-11-101-01 Sheet 12 of 98 Sheets FCC ID: QWTBAP-100

### 4 RADIATED EMISSION MEASUREMENT

# 4.1 Applicable Standard

For unintentional radiator, the radiated emission shall comply with §15.109(a).

For intentional radiators, according to §15.247 (a), operation under this provision is limited to frequency hopping and digitally modulated, and the out band emission shall be comply with §15.247 (c)

### 4.2 Measurement Procedure

- 1. Setup the configuration per figure 1 and 2 for frequencies measured below and above 1 GHz respectively. Turn on EUT and make sure that it is in continuous operating function.
- 2. For emission frequencies measured below 1 GHz, a pre-scan is performed in a semi-anechoic chamber to determine the accurate frequencies of higher emissions and then each selected frequency is precisely measured. As the same purpose, for emission measured above 1 GHz, a pre-scan also be performed with a 1 meter measuring distance before final test.
- 3. For emission measured below and above 1 GHz, set the spectrum analyzer on a 120 kHz and 1 MHz resolution bandwidth respectively for each frequency measured in step 2.
- 4. The search antenna is to be raised and lowered over a range from 1 to 4 meters in horizontally polarized orientation. Position the highness when the highest value is indicated on spectrum analyzer, then change the orientation of EUT on test table over a range from 0° to 360° with a speed as slow as possible, and keep the azimuth that highest emission is indicated on the spectrum analyzer. Vary the antenna position again and record the highest value as a final reading. A RF test receiver is also used to confirm emissions measured.

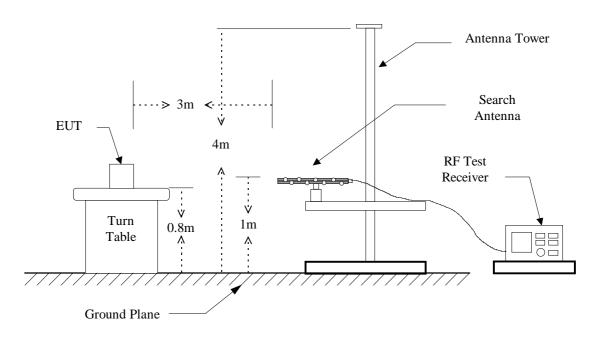
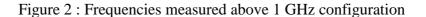
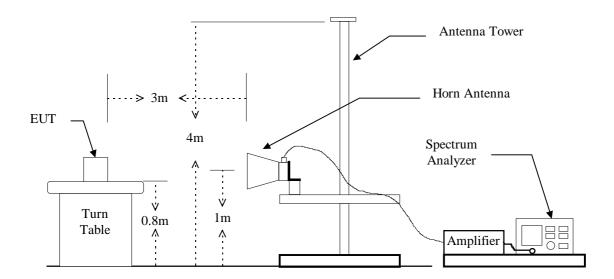


Figure 1 : Frequencies measured below 1 GHz configuration





# **4.3 Measuring Instrument**

The following instrument are used for radiated emissions measurement:

Equipment	Manufacturer	Model No.	Next Cal. Due		
EMI Test Receiver	Hewlett-Packard	8546A	09/06/2005		
Horn Antenna	EMCO	3115	06/04/2005		
LogBicone Antenna	Schwarzbeck	9160	10/26/2005		
Horn Antenna	EMCO	3116	07/19/2005		
Preamplifier	Hewlett-Packard	8449B	09/16/2005		
Spectrum Analyzer	Hewlett-Packard	8564EC	09/15/2005		

Measuring instrument setup in measured frequency band when specified detector function is used:

Frequency Band (MHz)	Instrument	Function	Resolution bandwidth	Video Bandwidth
30 to 1000	RF Test Receiver	Quasi-Peak	120 kHz	N/A
30 to 1000	Spectrum Analyzer	Peak	100 kHz	100 kHz
A1 1000	Spectrum Analyzer	Peak	1 MHz	1 MHz
Above 1000	Spectrum Analyzer	Average	1 MHz	10 Hz

Measuring instrument setup in measured frequency band when specified detector function is used:

Frequency Band (MHz)	Instrument	Function	Resolution bandwidth	Video Bandwidth
	Spectrum Analyzer	Peak	1 MHz	1 MHz
2390 & 2483.5	Spectrum Analyzer	Average	1 MHz	10 Hz

ETC Report No.: ET93S-11-101-01

Sheet 15 of 98 Sheets
FCC ID: QWTBAP-100

### 4.4 Radiated Emission Data

### 4.4.1 RF Portion

a) Channel 0

Operation Mode : Transmitting

Fundamental Frequency: 2402 MHz

Test Date: Dec. 27, 2004 Temperature: 23°C Humidity: 71%

Frequency	Reading (dBuV) H V		Factor (dB)	Result @3m (dBuV/m) Peak Ave		Limit @3m (dBuV/m) Peak Ave.		Margin (dB)	Table Deg. (Deg.)	Ant. High		
(MHz)	Peak	Ave	Peak	Ave	Corr.			1 001	71101		(209.)	(m)
1201.000					-13.9			74.0	54.0			
4804.000					-4.6			74.0	54.0			
12010.000					2.9			74.0	54.0			
16216.000	I				3.8			74.0	54.0			

- 1. Item of margin shown in above table refer to average limit.
- 2. Remark "---" means that the emissions level is too low to be measured.
- 3. Item "Margin" referred to Average limit while there is only peak result.
- 4. The radiation emissions have been measured to beyond the tenth harmonic of the fundamental frequency and show the significant frequencies, other means the value is too low to be detected.

ETC Report No.: ET93S-11-101-01

Sheet 16 of 98 Sheets
FCC ID: QWTBAP-100

### b) Channel 39

Operation Mode : Transmitting Fundamental Frequency : 2441 MHz

Test Date: Dec. 27, 2004 Temperature: 23°C Humidity: 71%

Frequency	ĺ	Reading (dBuV) H V		Factor (dB)	Result @3m (dBuV/m) Peak Ave		Limit @3m (dBuV/m) Peak Ave.		Margin (dB)	Table Deg. (Deg.)	Ant. High																					
(MHz)	Peak	Ave	Peak	Ave	Corr.															(H/V Max.)								· oan	,		(1 0 9.)	(m)
1220.500					-13.9			74.0	54.0																							
4882.000					-4.6			74.0	54.0																							
7323.000					-1.0			74.0	54.0																							
12205.000					2.9			74.0	54.0																							
19528.000					4.5			74.0	54.0																							

- 1. Item of margin shown in above table refer to average limit.
- 2. Remark "---" means that the emissions level is too low to be measured.
- 3. Item "Margin" referred to Average limit while there is only peak result.
- 4. The radiation emissions have been measured to beyond the tenth harmonic of the fundamental frequency and show the significant frequencies, other means the value is too low to be detected.

ETC Report No. : ET93S-11-101-01 Sheet 17 of 98 Sheets FCC ID: QWTBAP-100

### c) Channel 78

Operation Mode : Transmitting

Fundamental Frequency: 2480 MHz

Test Date: Dec. 27, 2004 Temperature: 23°C Humidity: 71%

Frequency (MHz)	Peak	Reading H Ave	y (dBuV) V Peak	Factor (dB) Corr.	Result @3m (dBuV/m) Peak Ave (H/V Max.)			@3m V/m) Ave.	Margin (dB)	Table Deg. (Deg.)	Ant. High (m)
1240.00				 -13.9			74.0	54.0			
4960.000				 -4.6			74.0	54.0			
7440.000				 -1.0			74.0	54.0			
12400.000				 2.9			74.0	54.0			
19840.000				 4.5			74.0	54.0			
22320.000				 1.3			74.0	54.0			

- 1. Item of margin shown in above table refer to average limit.
- 2. Remark "---" means that the emissions level is too low to be measured.
- 3. Item "Margin" referred to Average limit while there is only peak result.
- 4. The radiation emissions have been measured to beyond the tenth harmonic of the fundamental frequency and show the significant frequencies, other means the value is too low to be detected.

ETC Report No.: ET93S-11-101-01

Sheet 18 of 98 Sheets
FCC ID: QWTBAP-100

### 4.4.2 Other Emission

4.4.2.1

Operation Mode: 2402MHz

Test Date: Dec. 27, 2004 Temperature: 23°C Humidity: 71%

Emission	Meter Reading CO		CORR'd	Results		Limit	Margins	Table Degree		Ant. High	
Frequency	(dBuV)		Factor	( dBuV/m )		(3m)		(deg)		(m)	
( MHz)	HOR.	VERT.	( dB )	HOR.	VERT.	(dBuV/m)	( dB )	HOR.	VERT.	HOR.	VERT.
30.000	***	16.6	13.1	***	29.7	40.0	-10.3	***	312	***	1.0
58.130	***	15.2	13.2	***	28.4	40.0	-11.6	***	148	***	1.2
245.340	13.5	***	14.6	28.1	***	46.0	-17.9	32	***	1.0	***
300.630	***	13.3	16.8	***	30.1	46.0	-15.9	***	193	***	1.3
320.030	***	13.6	17.5	***	31.1	46.0	-14.9	***	243	***	1.0
363.680	12.4	***	18.8	31.2	***	46.0	-14.8	149	***	1.0	***
387.930	12.3	***	18.8	31.1	***	46.0	-14.9	313	***	1.2	***
405.390	***	10.8	19.4	***	30.2	46.0	-15.8	***	194	***	1.2
426.730	***	10.0	20.1	***	30.1	46.0	-15.9	***	131	***	1.0
604.240	14.0	***	23.8	37.8	***	46.0	-8.2	278	***	1.3	***
676.990	12.2	***	25.7	37.9	***	46.0	-8.1	254	***	1.2	***
754.590	12.1	***	27.0	39.1	***	46.0	-6.9	178	***	1.0	***

- 1. Place of Measurement: <u>Measuring site of the ETC.</u>
- 2. Remark "\*\*\*" means that the emissions level is too low to be measured.
- 3. Remark "#" means the noise was low, so record the peak value.
- 4. Item "Margin" referred to Q.P. limit while there is only peak result.
- 5. Please refer to page 20 to page 51 for chart

ETC Report No.: ET93S-11-101-01

Sheet 19 of 98 Sheets
FCC ID: QWTBAP-100

4.4.2.2

Operation Mode: Unintentional Emission

Test Date: Dec. 27, 2004 Temperature: 23°C Humidity: 71%

Emission	Meter Reading		CORR'd	Results		Limit	Margins	Table Degree		Ant. High	
Frequency	( dBuV )		Factor	( dBuV/m )		(3m)		(deg)		(m)	
(MHz)	HOR.	VERT.	( dB )	HOR.	VERT.	(dBuV/m)	( dB )	HOR.	VERT.	HOR.	VERT.
284.140	15.0	***	15.7	30.7	***	46.0	-15.3	32	***	1.2	***
225.940	***	25.4	13.7	***	39.1	46.0	-6.9	***	312	***	1.0
303.540	21.8	24.3	16.8	38.6	41.1	46.0	-4.9	143	334	1.2	1.2
387.930	17.3	15.4	18.8	36.1	34.2	46.0	-9.9	212	243	1.0	1.2
484.930	13.6	12.8	21.1	34.7	33.9	46.0	-11.3	314	197	1.0	1.0
504.330	16.6	13.4	21.5	38.1	34.9	46.0	-7.9	189	168	1.0	1.0
676.990	***	10.8	25.7	***	36.5	46.0	-9.5	***	231	***	1.2
771.080	13.0	***	27.2	40.2	***	46.0	-5.8	79	***	1.0	***

- 1. Place of Measurement: Measuring site of the ETC.
- 2. Remark "\*\*\*" means that the emissions level is too low to be measured.
- 3. Remark "#" means the noise was low, so record the peak value.
- 4. Item "Margin" referred to Q.P. limit while there is only peak result.
- 5. Please refer to page 20 to page 51 for chart

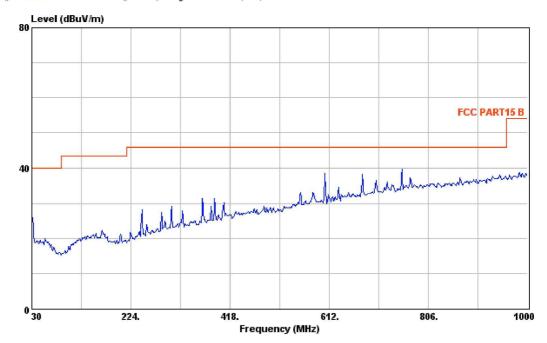
Sheet 20 of 98 Sheets FCC ID: QWTBAP-100

### Horizontal



ETC TEST LABORTARY

Data#: 4073 File#: C:\Program Files\E3\MARK.emi



Site : MOO SITE

Condition : FCC PART15 B 3m HORIZONTAL

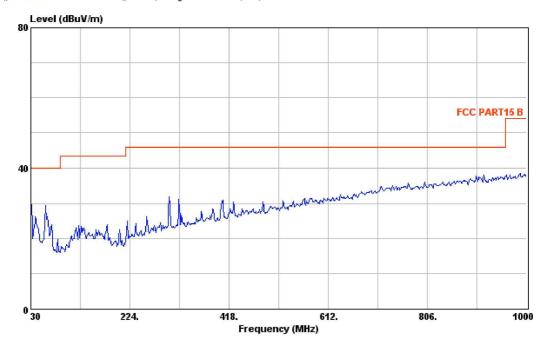
EUT

MODEL : BAP-100 memo : CHO



ETC TEST LABORTARY

Data#: 4070 File#: C:\Program Files\E3\MARK.emi

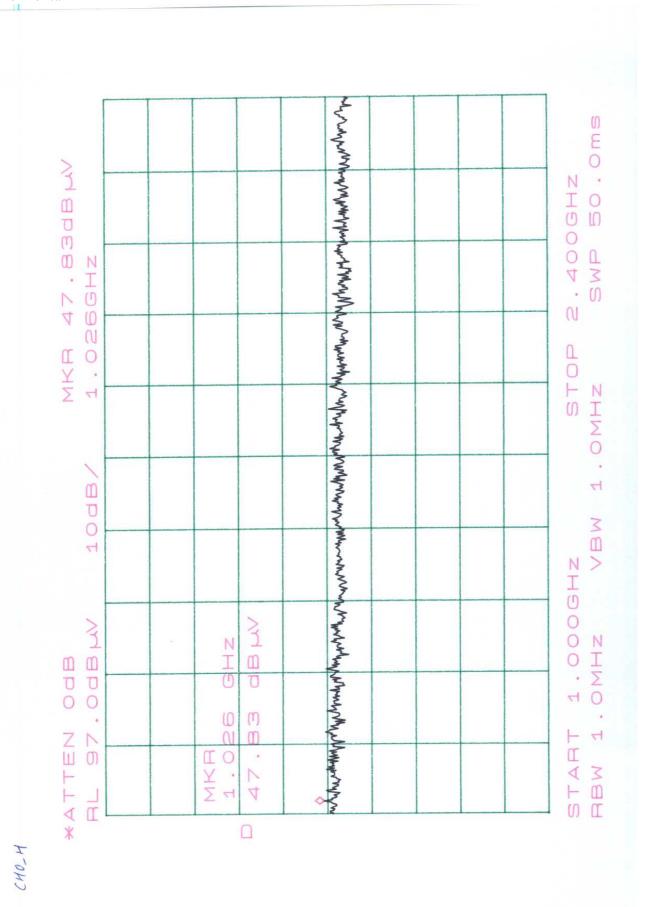


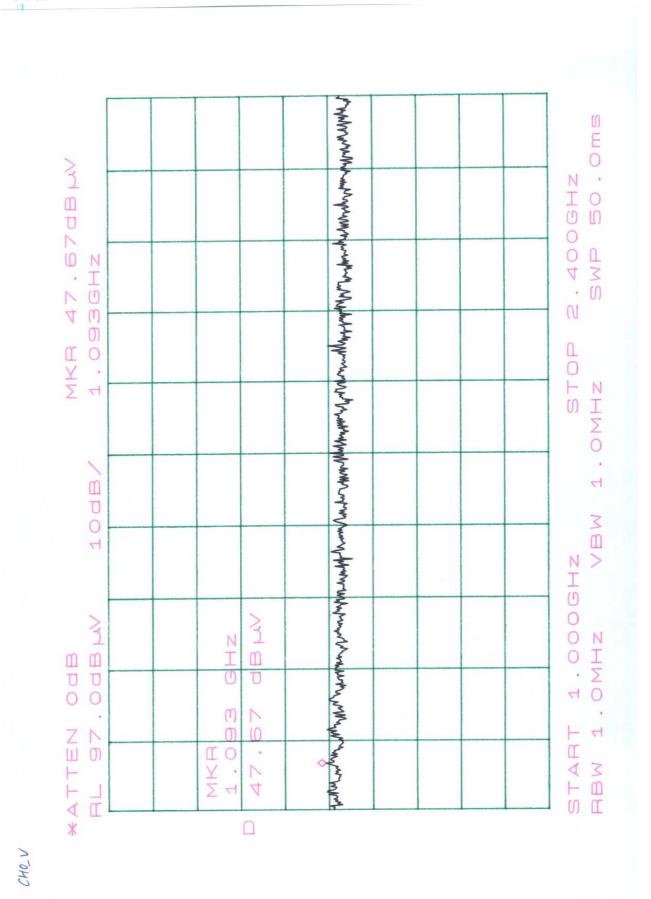
Site : MOO SITE

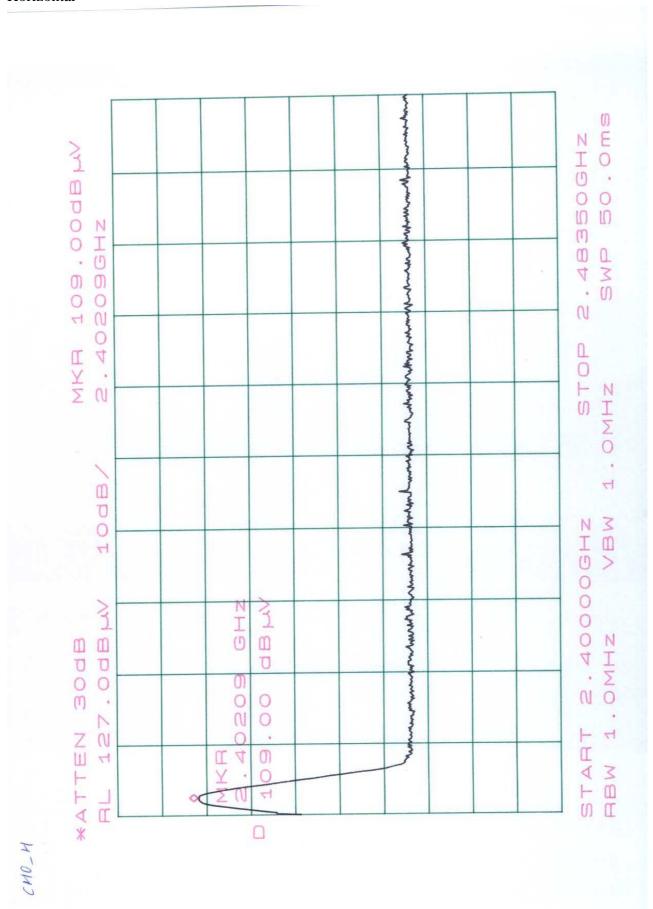
Condition : FCC PART15 B 3m VERTICAL

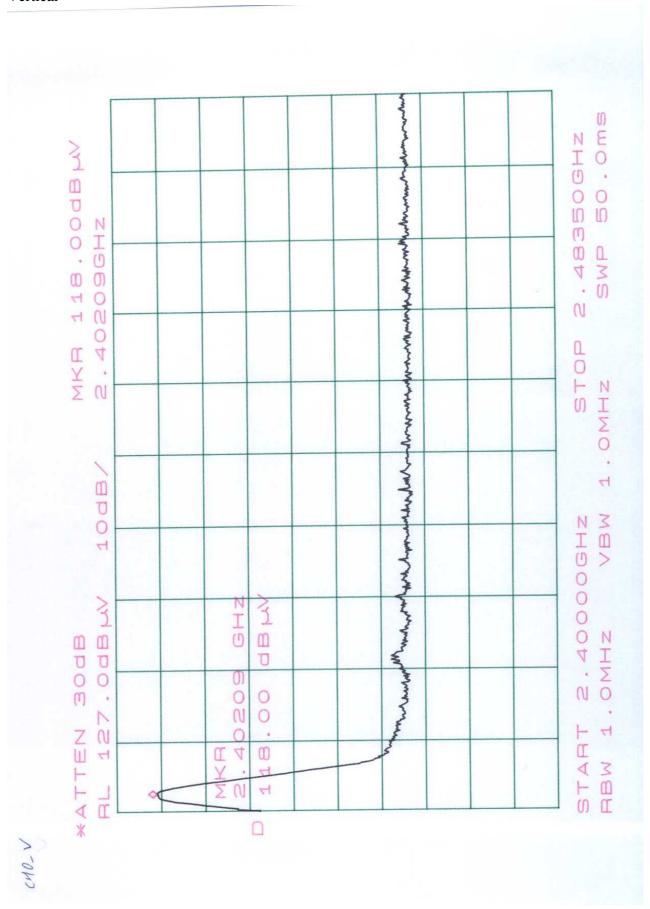
EUT

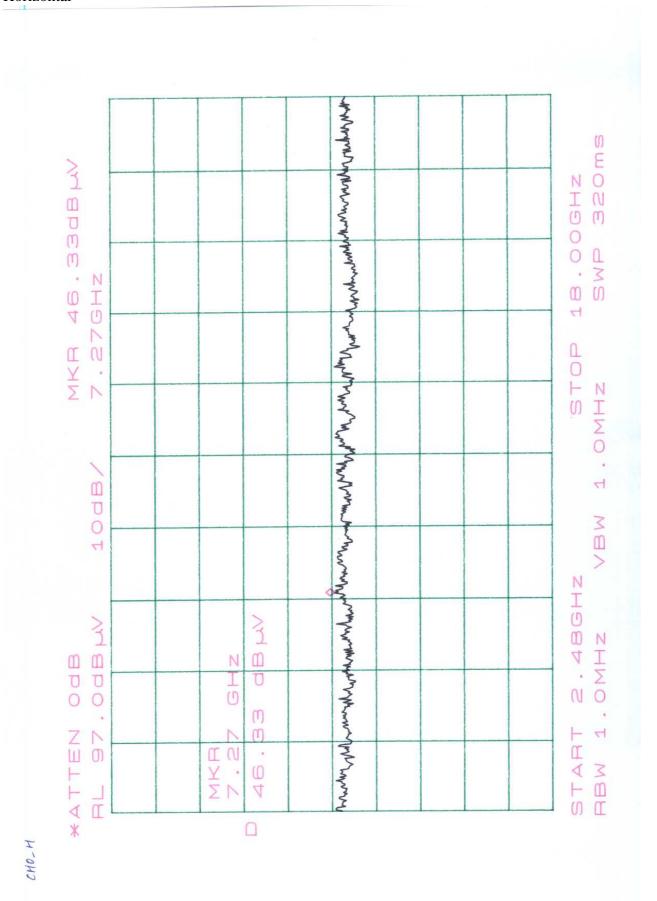
MODEL : BAP-100 memo : CHO

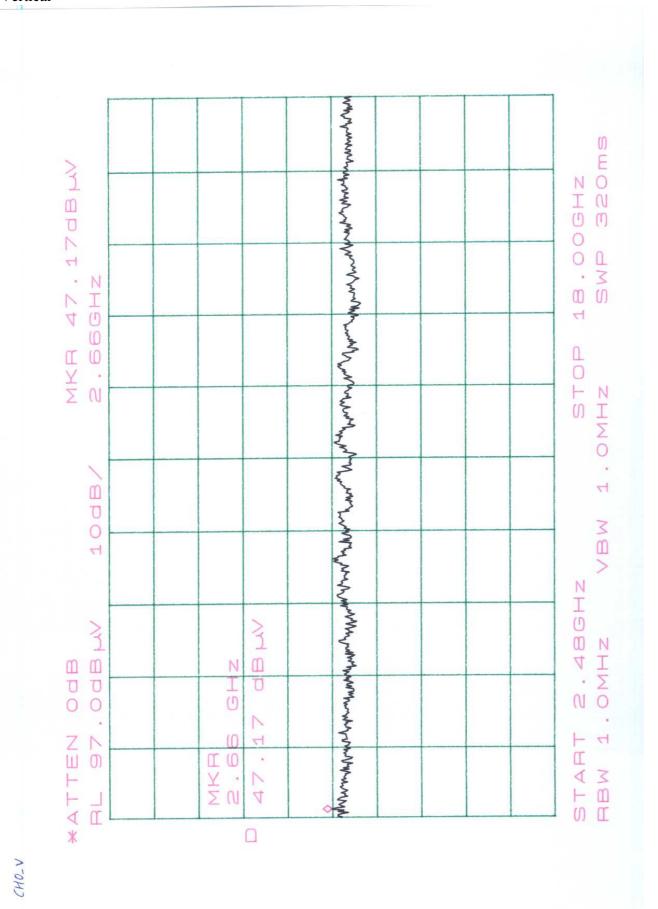


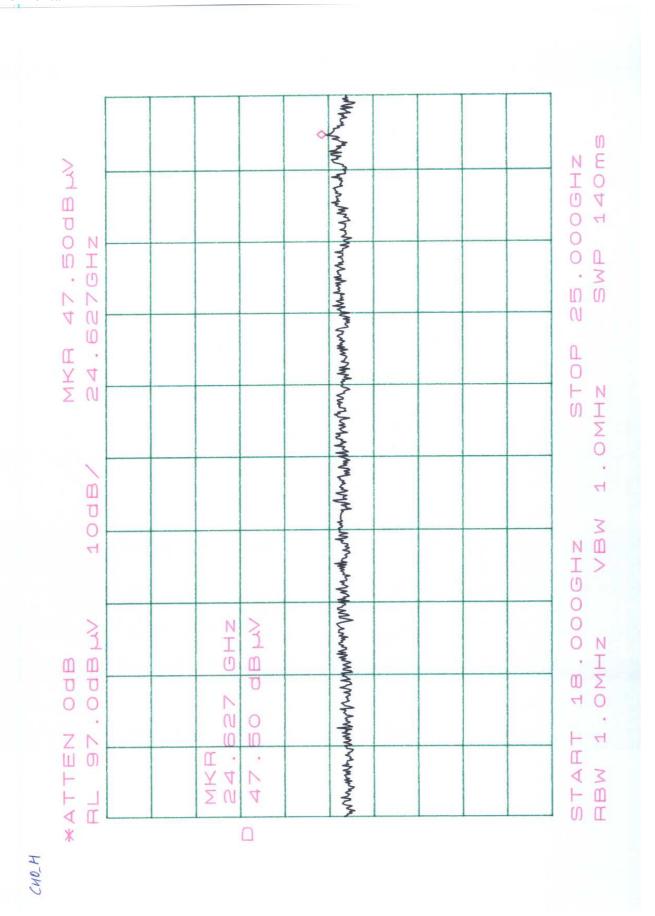


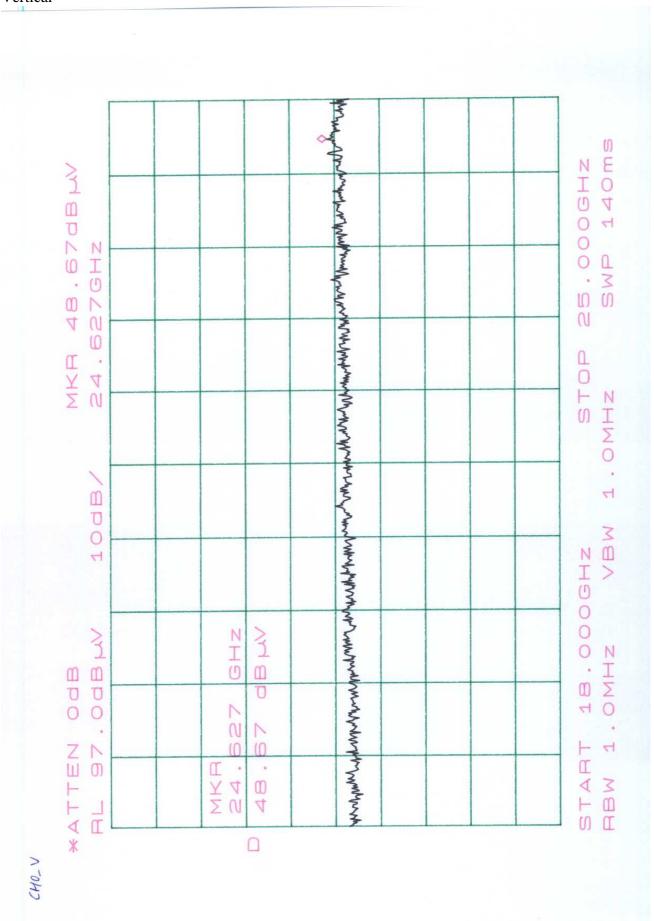












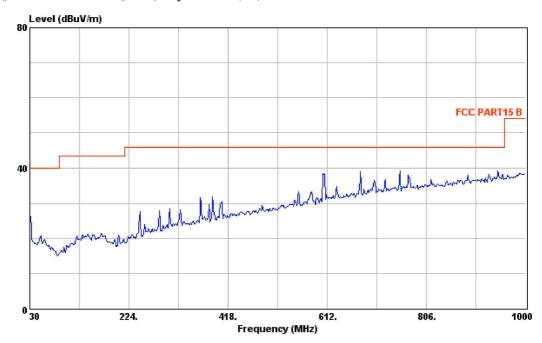
Sheet 30 of 98 Sheets FCC ID: QWTBAP-100

### Horizontal



ETC TEST LABORTARY

Data#: 4074 File#: C:\Program Files\E3\MARK.emi



Site : MOO SITE

Condition : FCC PART15 B 3m HORIZONTAL

EUT

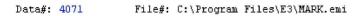
MODEL : BAP-100 memo : CH39

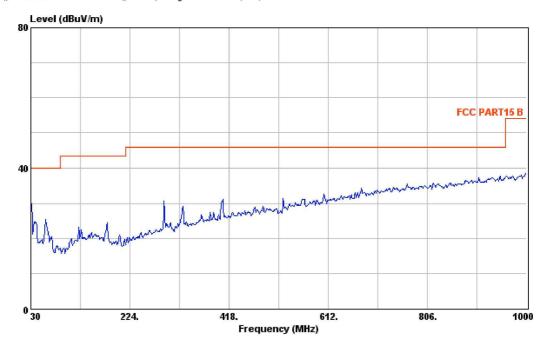
Sheet 31 of 98 Sheets FCC ID: QWTBAP-100

### Vertical



ETC TEST LABORTARY



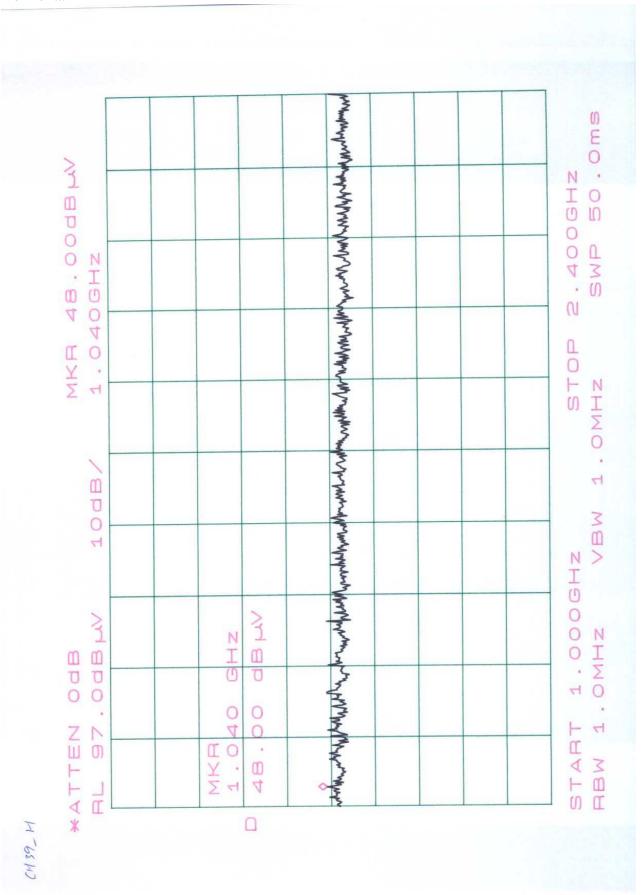


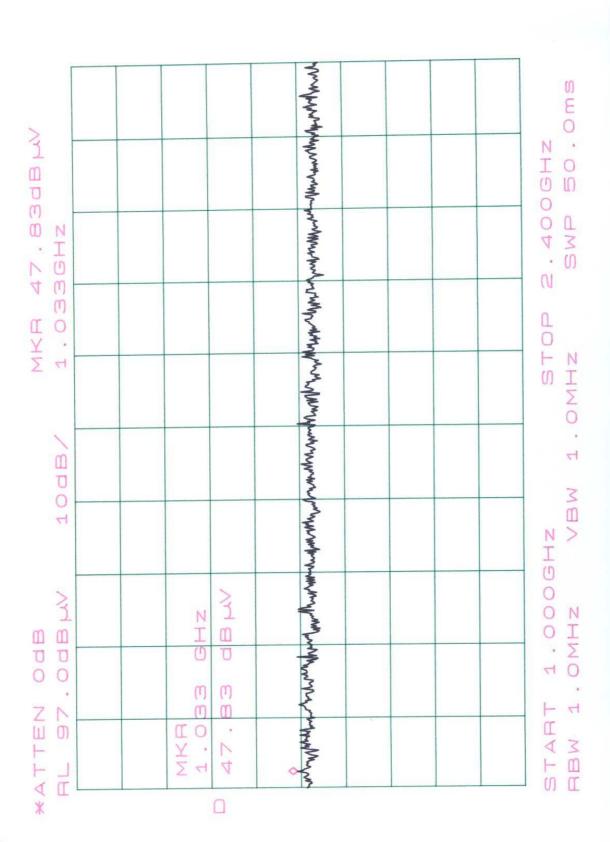
Site : MOO SITE

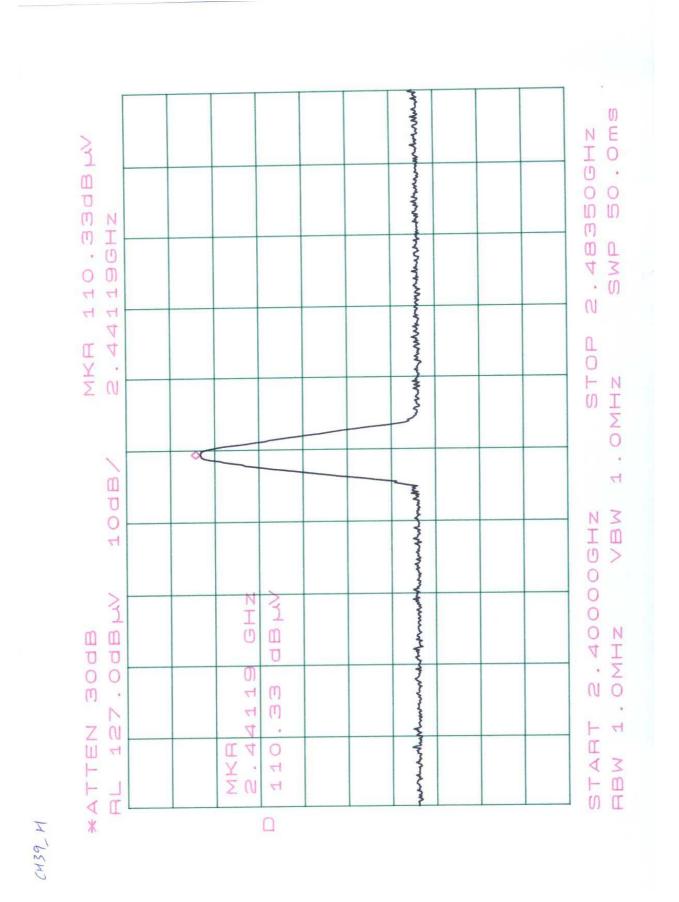
Condition : FCC PART15 B 3m VERTICAL

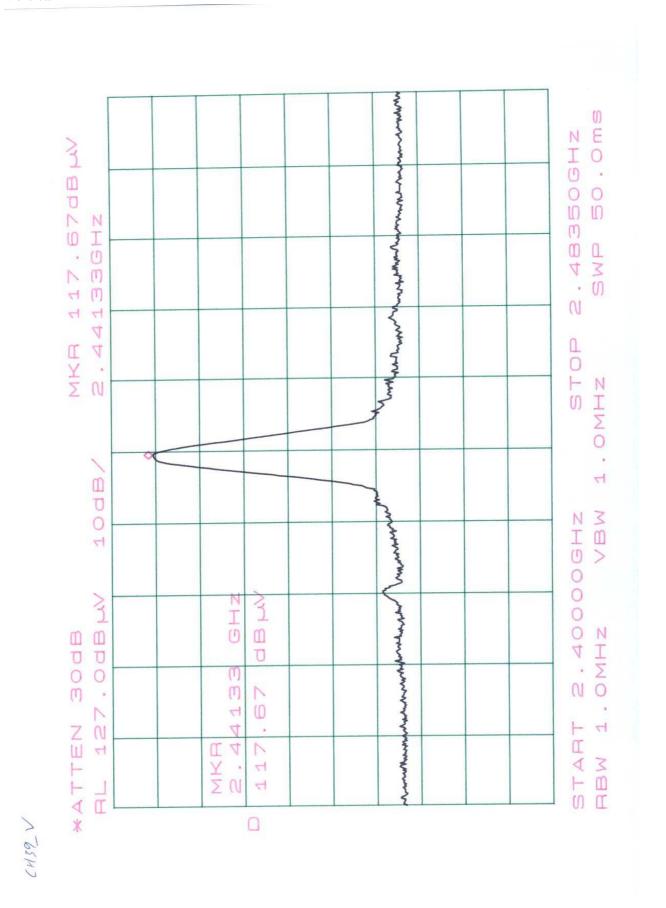
EUT

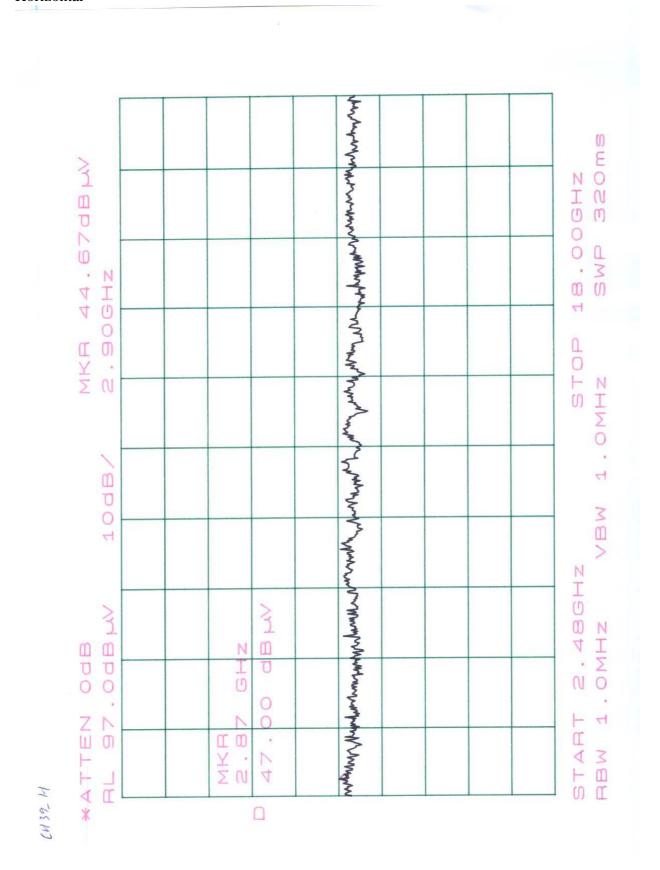
MODEL : BAP-100 memo : CH39

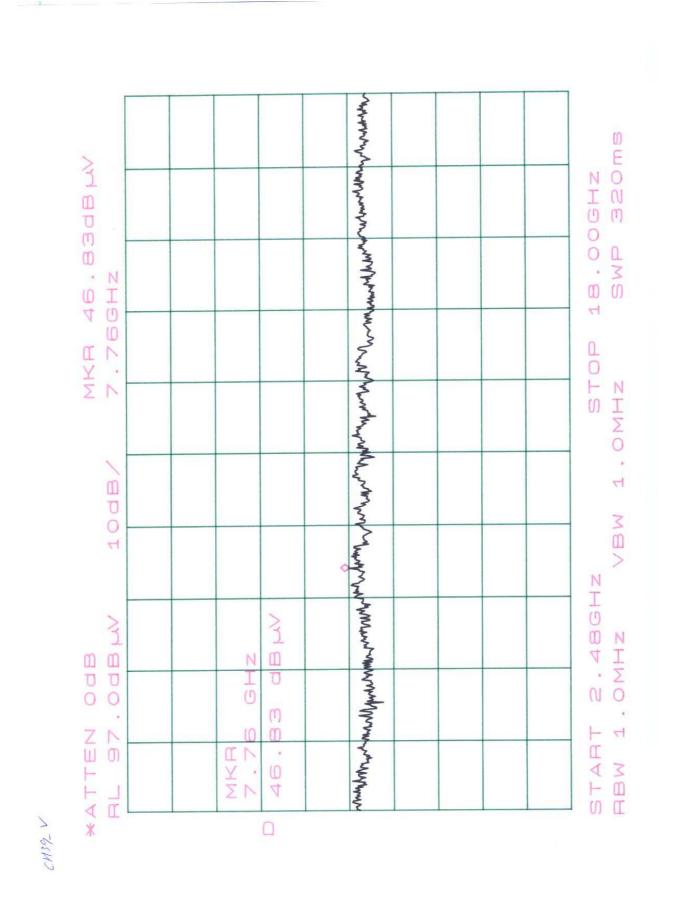


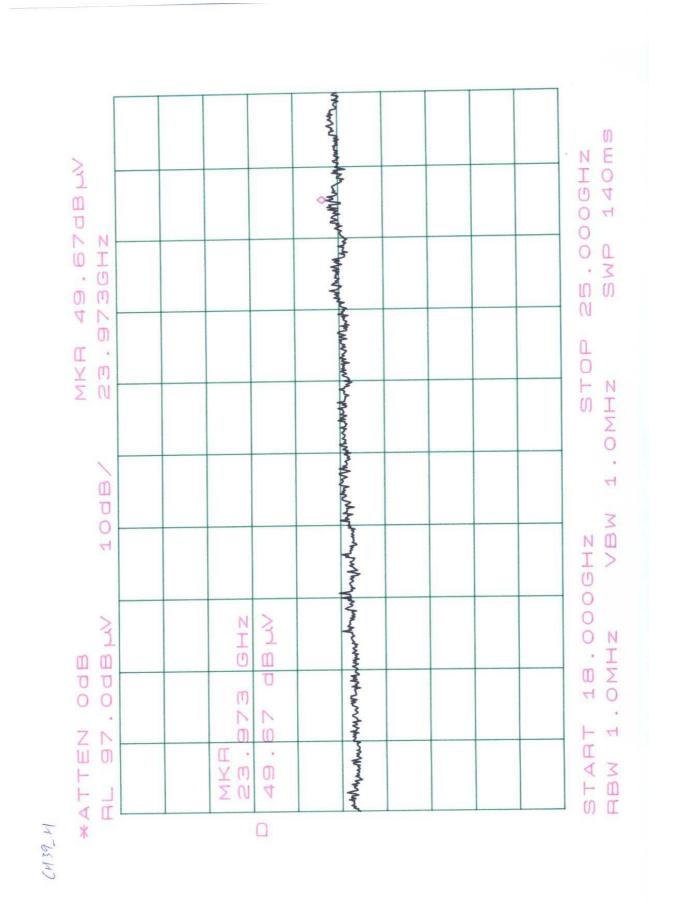


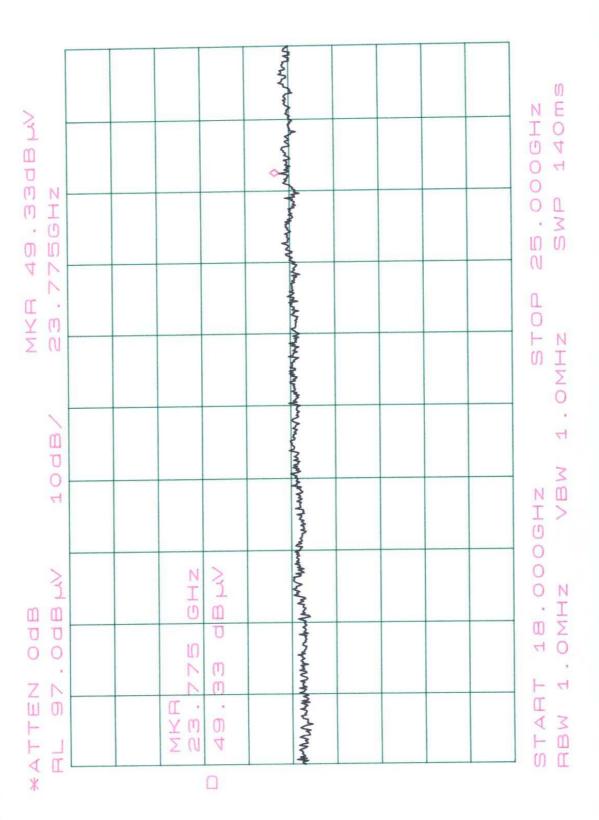












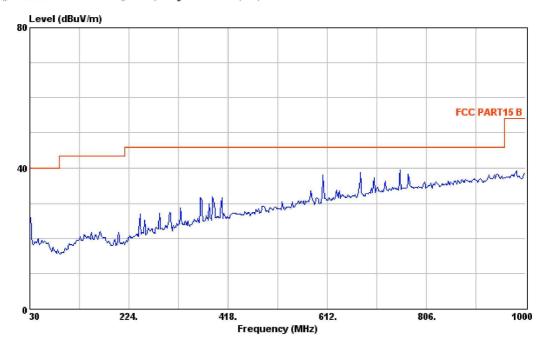
Sheet 40 of 98 Sheets FCC ID: QWTBAP-100

# Horizontal



ETC TEST LABORTARY

Data#: 4075 File#: C:\Program Files\E3\MARK.emi



Site : MOO SITE

Condition : FCC PART15 B 3m HORIZONTAL

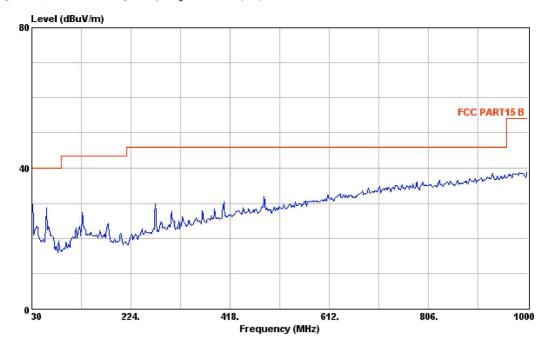
EUT

MODEL : BAP-100 memo : CH78



ETC TEST LABORTARY

Data#: 4072 File#: C:\Program Files\E3\MARK.emi



Site : MOO SITE

Condition : FCC PART15 B 3m VERTICAL

EUT

MODEL : BAP-100 memo : CH78

