

# FCC TEST REPORT

**Equipment Under Test** : Wireless Microphone  
**Model No.** : HFK2MI4

**Applicant** : Euro Communication Equipments SAS  
**Address of Applicant** : Route de Foix 11500 NEBIAS Quillan, France

Standards:

**FCC Part 15      subpart C**

In the configuration tested, the EUT complied with the standards specified above.

**Remarks:**

This report details the results of the testing carried out on one sample, the results contained in this test report do not relate to other samples of the same product. The manufacturer should ensure that all products in series production are in conformity with the product sample detailed in this report.

This report may only be reproduced and distributed in full. If the product in this report is used in any configuration other than that detailed in the report, the manufacturer must ensure the new system complies with all relevant standards. Any mention of SGS Taiwan EMC Services or testing done by SGS Taiwan EMC Services in connection with distribution or use of the product described in this report must be approved by SGS Taiwan EMC Services in writing.

**Tested by** : Robert Chang      **Date** : Mar. 17, 2003

**Approved by** : Jason Lin      **Date** : Mar. 17, 2003

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# 1. General Information

## 1.1 Testing Laboratory

SGS Taiwan Ltd. ( FCC Registration number: 573967 )  
1F, No. 134, Wukung Road, Wuku industrial zone  
Taipei county , Taiwan , R.O.C.  
Telephone : +886-2-2299-3279  
Fax : +886-2-2298-2698  
Internet : <http://www.sgs.com.tw>

## 1.2 Details of Applicant

Name : Euro Communication Equipments SAS  
Address : Route de Foix 11500 NEBIAS Quillan, France

Contact : Mr. Michel Marchant  
Telephone : +33-4-68208730

## 1.3 Description of EUT(s)

1	Product name	Wireless Microphone
2	Product ID	HFK2MI4
3	Supply Voltage	Power by 2 AAA battery , 3V
4	Carrier Frequency	40.675Mhz

## 1.4 Operation Procedure

Turn on EUT and put it in the center of Turn-table, measuring distance is 3 meter.  
When performing extreme condition test, put the EUT in the climatic chamber, adjust the temperature and measured by near-field probe.

Testing requirement follows CFR47, Part 15.229 , testing site comply with the requirement of ANSI C63.4 standard.

## 2.Summary of Results

subclause	Parameter to be measures	Verdict	Page
15.209	Radiated emission Limits, general requirement	<i>PASS</i>	6
15.229(a)	Field Strength Limit	<i>PASS</i>	9
15.229(d)	Frequency Stability on Extreme condition	<i>PASS</i>	10

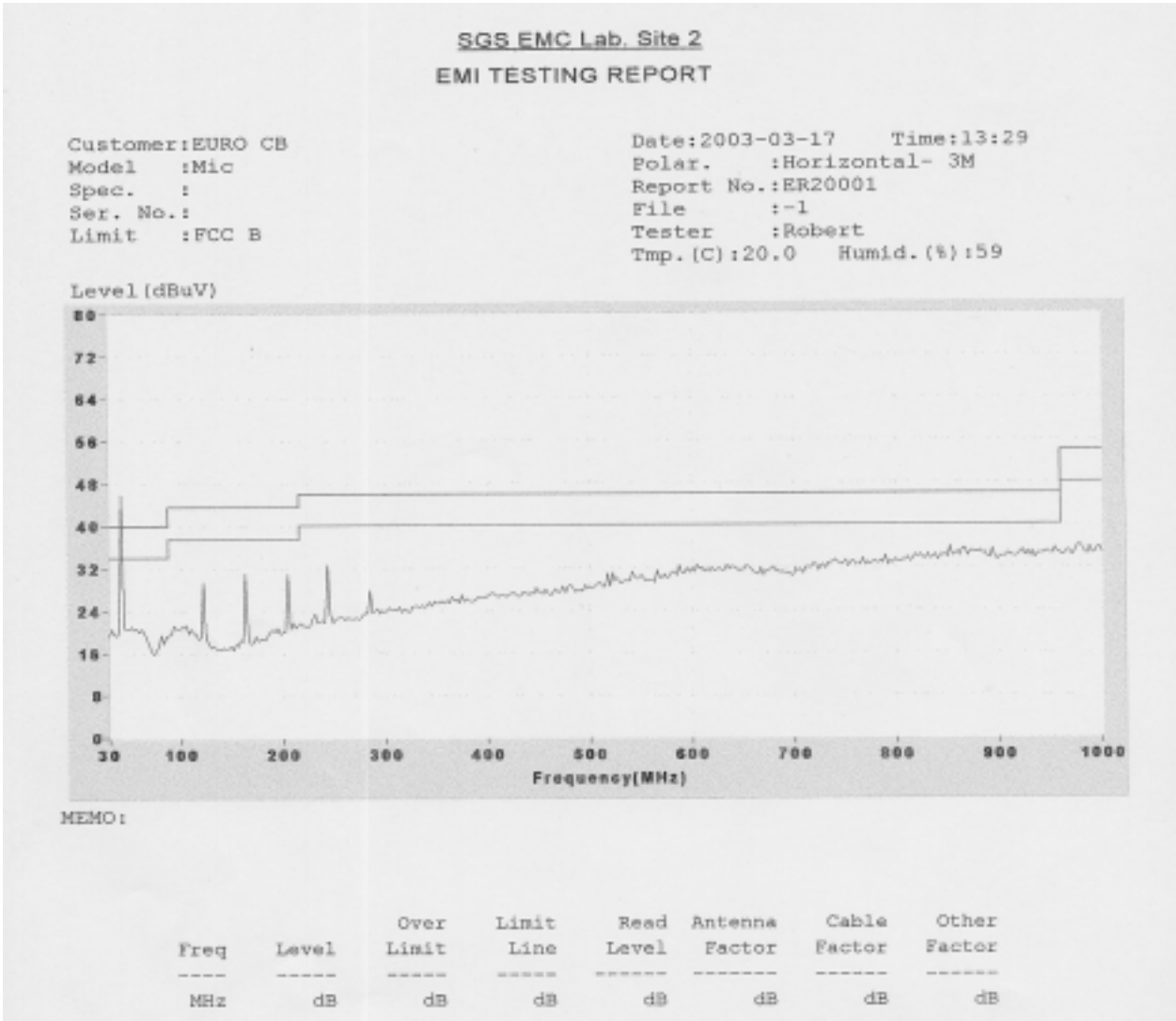
### **3. Instruments List**

<b>Instrument</b>	<b>Model</b>	<b>Serial number</b>	<b>Calibration date</b>
<b>Spectrum Analyzer</b>	<b>Agilent 7405A</b>	<b>US40240202</b>	<b>May 22, 2002</b>
<b>Antenna</b>	<b>Schwarzbeck VULB9163</b>	<b>159</b>	<b>July 1, 2002</b>
<b>Climatic chamber</b>	<b>Terchy MHG 120L</b>	<b>N/A</b>	<b>N/A</b>
<b>EMC Analyzer</b>	<b>HP 8594EM</b>	<b>3624A00203</b>	<b>Dec. 13, 2002</b>

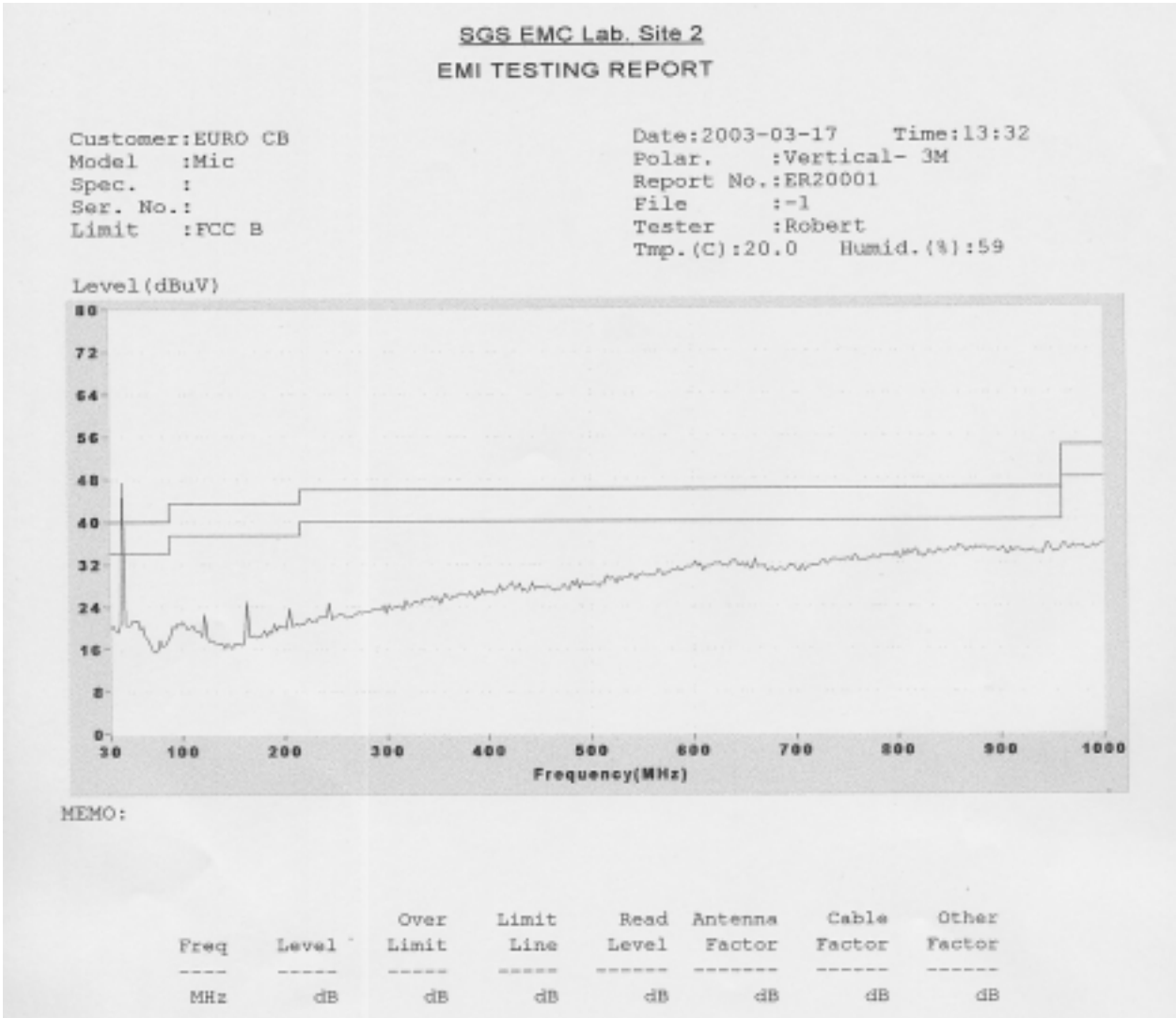
# 4. Measurements

## 4.1 Radiated emission Limits, general requirement SUBCLAUSE 15.209

30Mhz-1000Mhz Horizontal



30Mhz-1000Mhz Vertical



#### 4.2.1 Limits

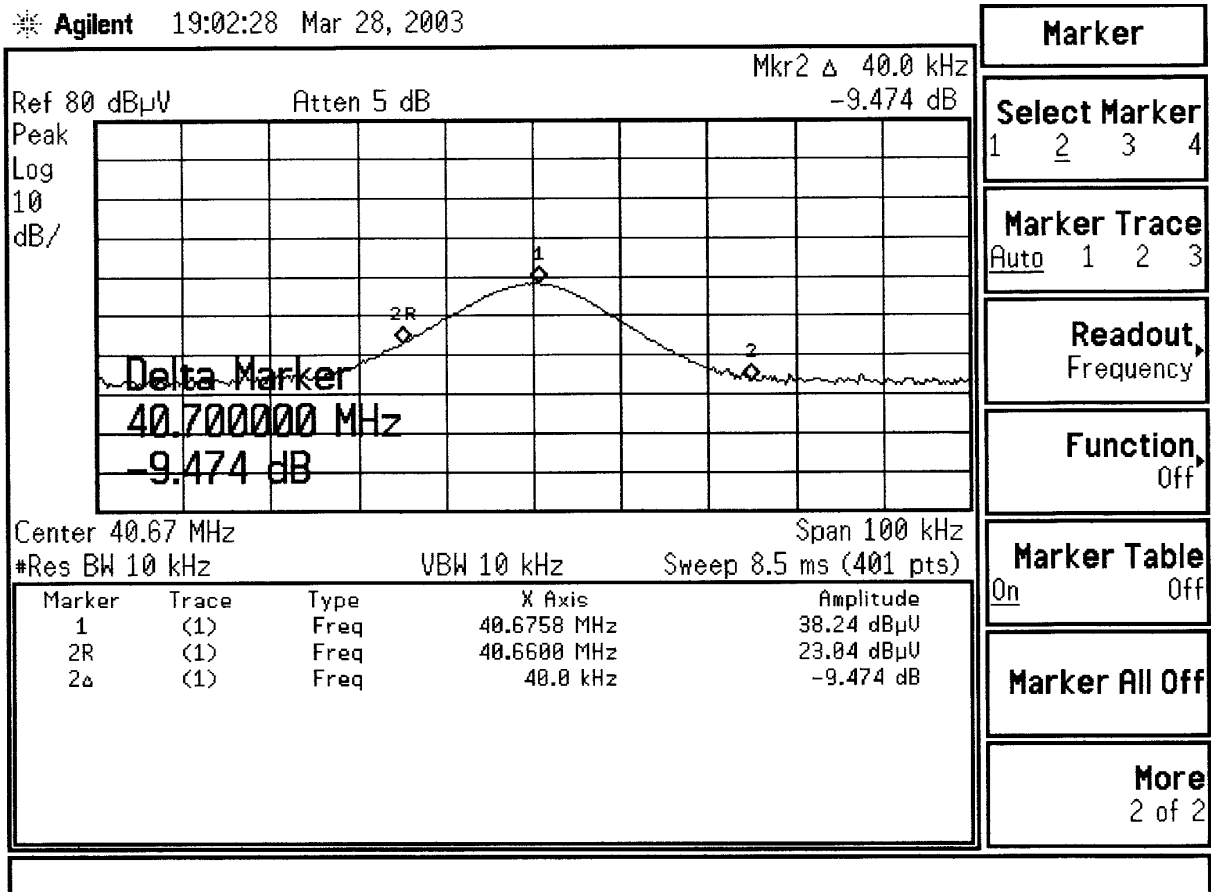
Frequency (MHz)	Field Strength (microvolts/meter)	Measurement Distance (meters)
0.009 - 0.490	2400/F(kHz)	300
0.490 - 1.705	24000/F(kHz)	30
1.705 - 30.0	30	30
30 - 88	100 **	3
88 - 216	150 **	3
216 - 960	200 **	3
Above 960	500	3



4.2 Field Strength Limit

SUBCLAUSE 15.229(a)

(a) Unless operating pursuant to the provisions in Section 15.231, the field strength of any emissions within this band shall not exceed 1000 microvolts/meter at 3 meters.



Center Freq:  $f=40.675$  Mhz

Real Value = 38.24 (read value) + 12.33 (Ant factor) + 0.47 (cable loss)

= 51.04 db μV

**4.3 Frequency Stability on Extreme condition SUBCLAUSE 15.229(d)**

**(d) The frequency tolerance of the carrier signal shall be maintained within +/- 0.01% of the operating frequency over a temperature variation of -20 degrees to + 50 degrees C at normal supply voltage, and for a variation in the primary supply voltage from 85% to 115% of the rated supply voltage at a temperature of 20 degrees C. For battery operated equipment, the equipment tests shall be performed using a new battery.**

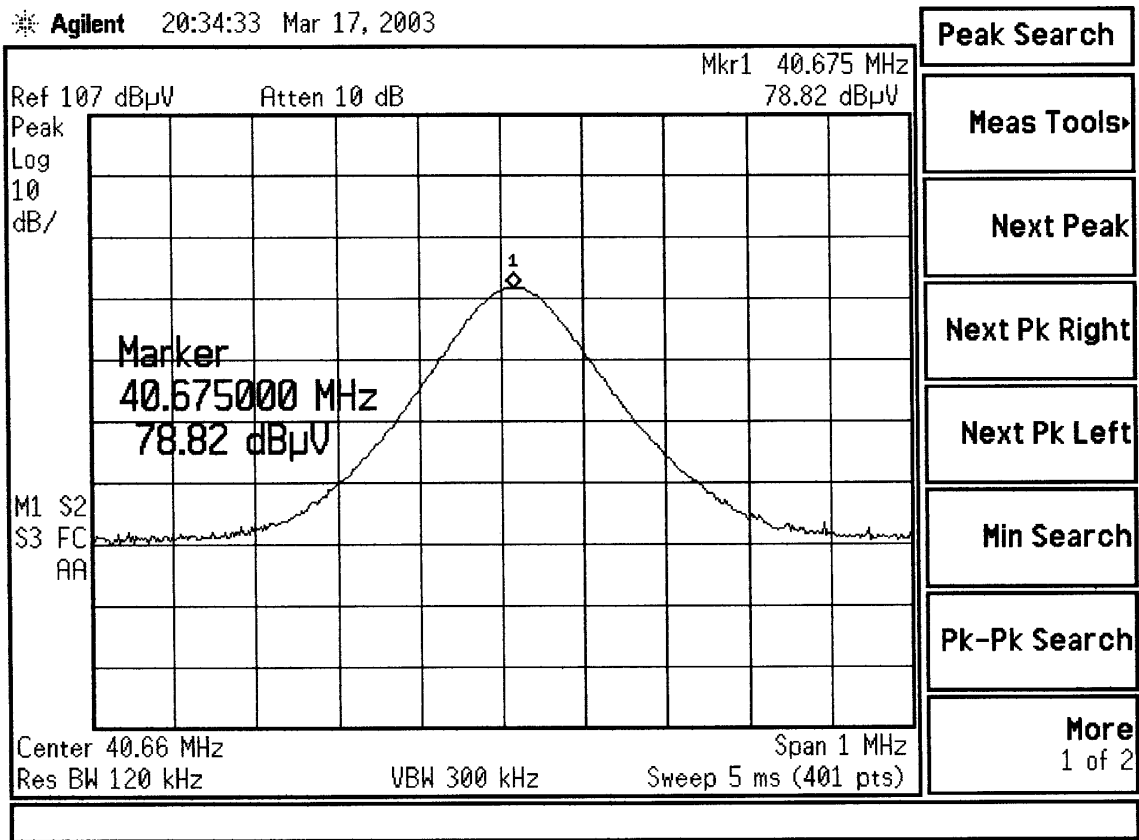
conditions	Nominal	-20°C	50°C	3.45V	2.55V
Center freq.(Mhz)	40.675	40.678	40.673	40.675	40.675
Deviation (%)	N/A	0.0073	-0.0049	0	0

**Nominal voltage = 3V**

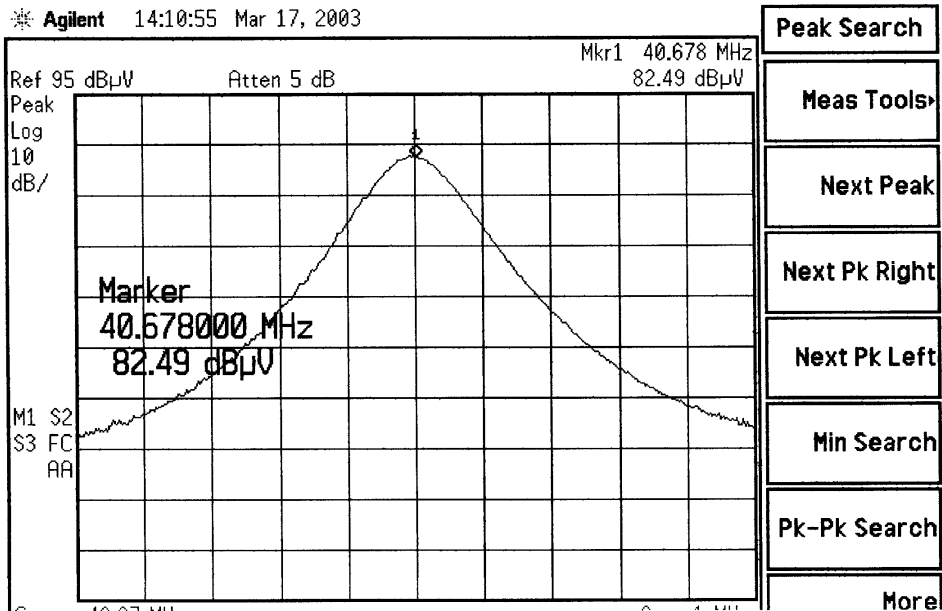
**0.85 \* 3V = 2.55V**

**1.15 \* 3V = 3.45V**

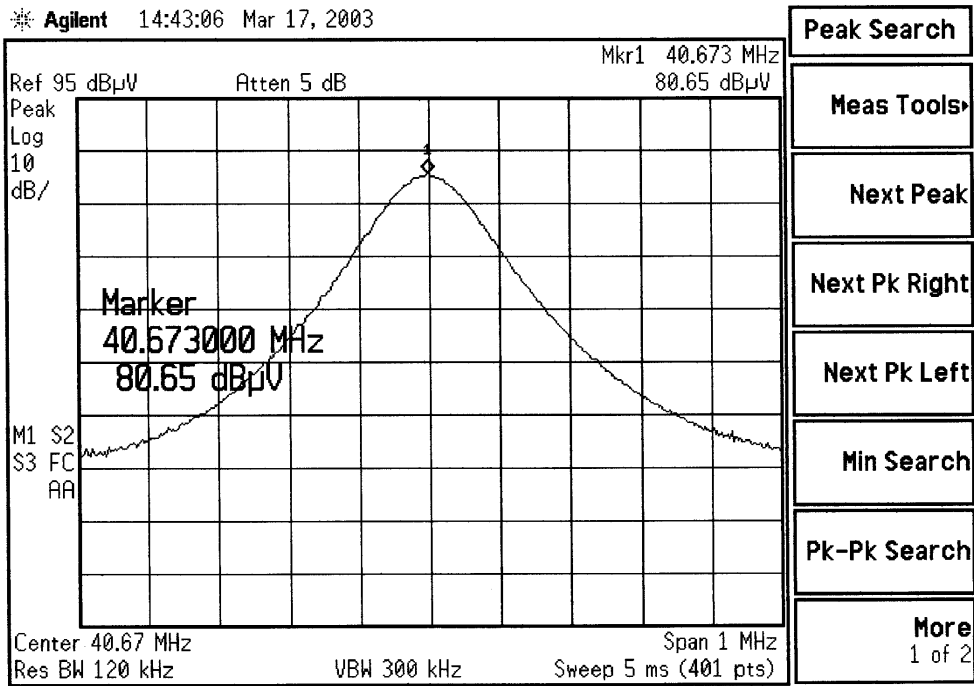
Nominal condition( voltage = 3V, Temperature = 20 °C, measured by near-field probe



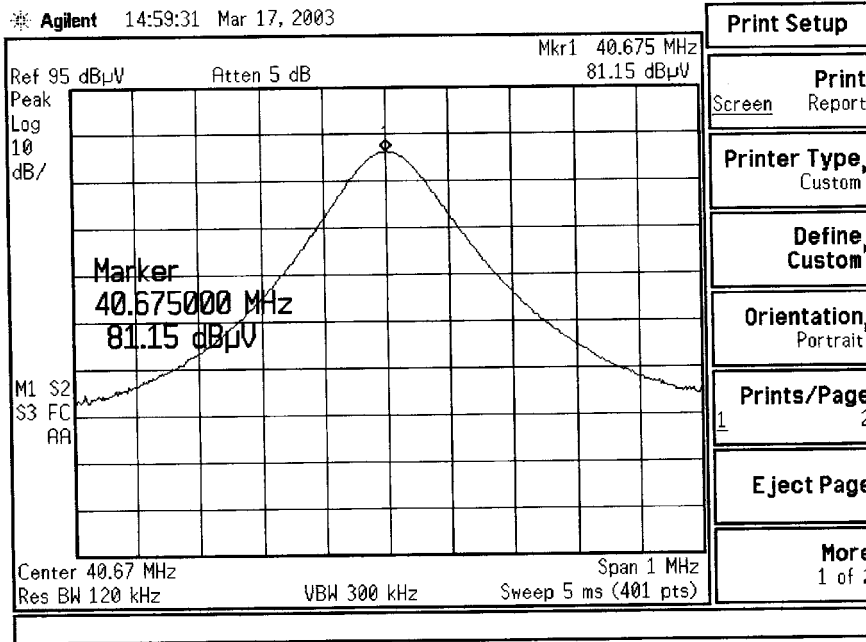
Measured at -20 °C



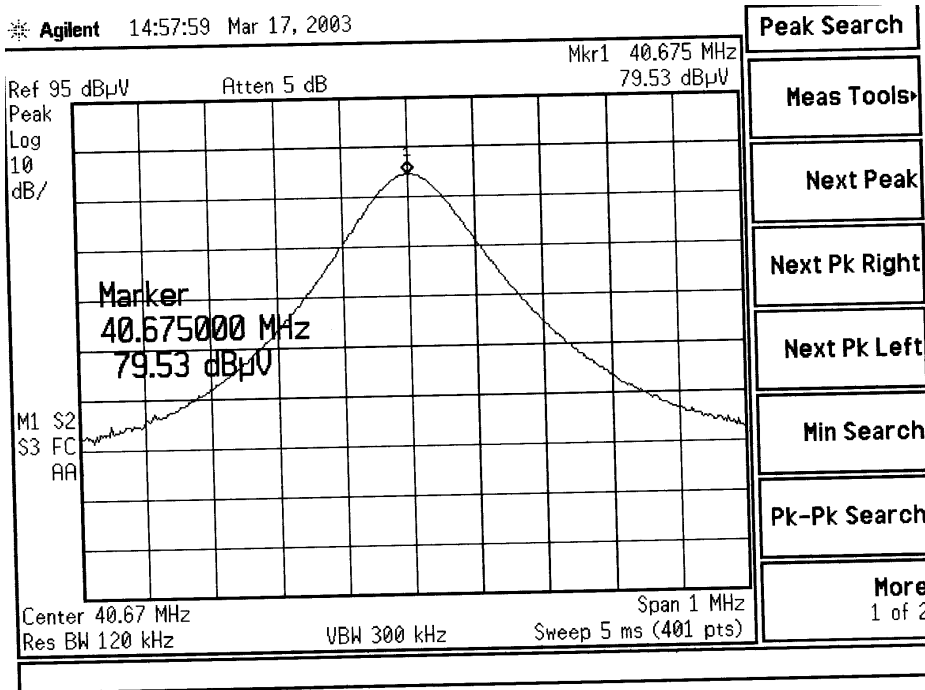
Measured at 50 °C



### Measured at 3.45 Voltage supply



### Measured at 2.55 voltage supply



**Appendix : Test setup Photos**

**<The photos are saved separately>**

**External Photos**

**<The photos are saved separately>**

**Internal Photos**

**<The photos are saved separately>**