

**SGS-CSTC Standards  
Technical Services Co., Ltd.**

1/F, 4/F, 6/F, 7/F, 8/F, 9/F, 10/F, the 3rd Building No. 889,  
Yishan Road, Xuhui District, Shanghai, China

Telephone: +86 (0) 21 6140 2666  
Fax: +86 (0) 21 5450 0954  
Tino\_Pan@sgs.com

FCC ID: VW3HILOC  
Report No.: SHEMO080200006IT  
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## **FCC TEST REPORT**

**Application No.:** SHEMO080200006IT

**Applicant:** SAGEM COMMUNICATIONS

**Equipment Under Test (EUT):**

**NOTE:** The following sample(s) submitted was/were identified on behalf of the client as

**EUT Name:** GSM/GPRS Module

**Model No.:** HILO

**Serial No.:** Not supplied by client

**GSM Frequency Bands:** GSM850/PCS1900

**Standards:** CFR 47 part 2: 2004,  
CFR 47 Part 15 Subpart B: 2005,  
ANSI C63.4: 2003

**Date of Receipt:** February 22, 2008

**Date of Test:** February 23, 2008 to March 18, 2008

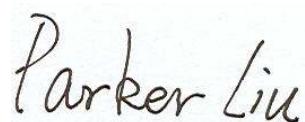
**Date of Issue:** March 20, 2008

<b>Test Result :</b>	<b>PASS</b>
----------------------	-------------

Authorized Signature:



Tino Pan  
E&E Section Manager  
SGS-CSTC Co., Ltd.



Parker Liu  
E&E Project Engineer  
SGS-CSTC Co., Ltd

This report refers to the General Conditions for Inspection and Testing Services, printed overleaf  
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 and does not permit the use of the SGS PRODUCT CERTIFICATION MARK.. 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 International Electrical Approvals or testing done by SGS International Electrical Approvals in connection with, distribution or use of the product described in this report must be approved by SGS International Electrical Approvals in writing.

All test results in this report can be traceable to National or International Standards.

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### **2 Test Summary**

<b>Test</b>	<b>Test Requirement</b>	<b>Test Method</b>	<b>Class / Severity</b>	<b>Result</b>
Radiated Emission 30MHz-1000MHz	CFR 47 Part 15 Subpart B	ANSI C63.4: 2003	Class B	PASS
Conducted Emission 150KHz-30MHz	CFR 47 Part 15 Subpart B	ANSI C63.4: 2003	Class B	N/A

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## 4 General Information

### 4.1 Client Information

Applicant: SAGEM COMMUNICATIONS  
Address of Applicant: Le Ponan de Paris 27 rue Leblanc 75015 PARIS France

### 4.2 General Description of E.U.T.

EUT Name: GSM/GPRS Module  
Model No.: HILO  
Serial No.: Not supplied by client  
GSM Frequency Bands: GSM850/PCS1900

### 4.3 Details of E.U.T.

Power Supply: DC3.7V  
Hardware Version: V2  
Software Version: HIC,A  
RS232 Cable: Type: Data Cable

### 4.4 Description of Support Units

Name / Function	Model No	Remark
N/A	N/A	N/A

### 4.5 Standards Applicable for Testing

The customer requested EMC tests for a GSM/GPRS Module.

The standards used was CFR 47 part 2: 2004 and CFR 47 part 15 Subpart B: 2005:

**Table 1 : Tests Carried Out Under CFR 47 Part 15 Subpart B: 2005 :**

Standard	Status
FCC Part 15 Subpart B: 2005 Radiated Emission	✓
FCC Part 15 Subpart B: 2005 Conducted Emission	✗

✗ Indicates that the test is not applicable

✓ Indicates that the test is applicable

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## **4.6 Test Location**

Radiated Emission was performed at:

SIMT EMC Laboratory, No.716 Yi shan Road, Shanghai, P.R.China.

Tel: +86 21 64701390 Fax: +86 21 64514252

## **4.6 Deviation from Standards**

None.

## **4.7 Abnormalities from Standard Conditions**

None.

## **4.8 Monitoring of EUT for All Immunity Test**

N/A

## **4.9 Test Confident level**

Test Confident level is recognized, certified, or accredited by the following organizations:

### **NVLAP – Lab Code: 200632-0**

SIMT EMC Laboratory is recognized under the National Voluntary Laboratory Accreditation Program (NVLAP/NIST). NVLAP Code: 200632-0. Effective dates: 2008-01-01 through 2008-12-31.

### **VCCI**

The 10m Semi-anechoic chamber and Shielded Room of SIMT have been registered in accordance with the Regulations for Voluntary Control Measures with Registration No.: 1153.

Date of Registration: May 19, 2007. Valid until May 18, 2010

### **CNAL – LAB Code: L0134**

SIMT EMC Laboratory has been assessed and in compliance with CNAL/AC01:2005 accreditation criteria for testing laboratories (identical to ISO/IEC 17025:2005 General Requirements for the Competence of Testing Laboratories.)

### **FCC – Registration No.: 142171**

SIMT EMC Laboratory has been registered and fully described in a report filed with the (FCC) Federal Communications Commission. The acceptance letter from the FCC is maintained in our files. Registration 142171. Effective dates: November 30, 2005 through November 30, 2008. With the above and NVLAP, SIMT is an authorized test laboratory for the DoC process.

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## 5 Equipments Used during Test

### RE in SAC

Item	Test Equipment	Manufacturer	Model No.	Serial No.	Cal. Date	Cal.Due date
1	HORN ANTENNA	R&S	HF 906	100023	2007-06-17	2008-06-16
2	BROADBAND ANTENNA	R&S	HL 562	100019	2007-06-17	2008-06-16
3	EMI TEST RECEIVER	R&S	ESI 26	838786/011	2008-03-06	2009-03-05
4	UNIVERSAL RADIO COMMUNICATION TESTER	R&S	CMU 200	100536	2007-01-25	2008-01-24

### General Equipment

Item	Test Equipment	Manufacturer	Model No.	Serial No.	Cal. Date	Cal. Date
1	Temperature, Humidity & Barometer	Oregon Scientific	BA-888	EMC0001 to EMC0004	2007-07-25	2008-07-24
2	DMM	Fluke	73	70681569 or 70671122	2007-07-23	2008-07-22

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## 6 Emission Test Results

### 6.1 Radiated Emissions, 30MHz to 1GHz

Test Requirement:	CFR 47 Part 15 Subpart B
Test Method:	ANSI C63.4, CISPR 22
Test Date:	March 18, 2008
Frequency Range:	30MHz to 1GHz
Measurement Distance:	3m for ANSI C63.4 and 10m for CISPR 22
Class:	N/A
Detector:	Peak for pre-scan (120kHz resolution bandwidth)

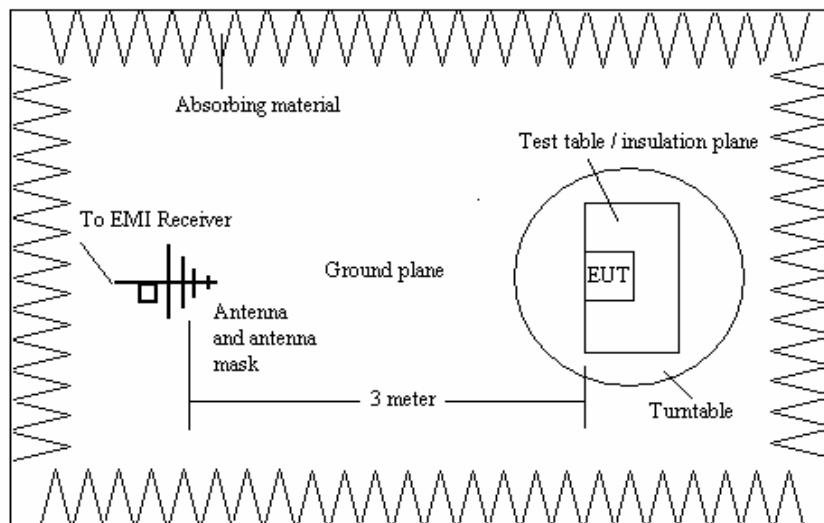
#### 6.1.1 E.U.T. Operation

Operating Environment:

Temperature: 25.0 °C      Humidity: 55 % RH      Atmospheric Pressure: 1014 mbar

EUT Operation: EUT allocated channel mode Charging, GSM850 and PCS 1900, connected to PC through RS232 cable.

#### 6.1.2 Test setup:



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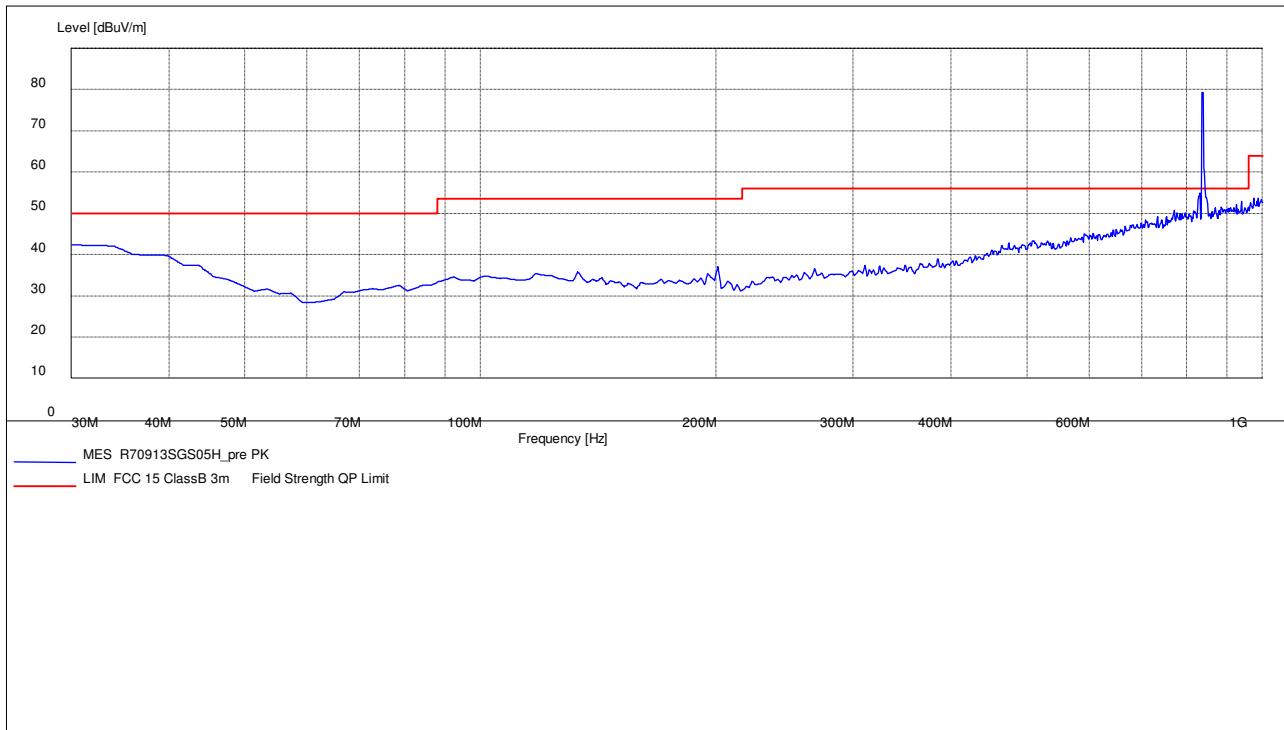
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## 6.1.3 Test Result:

GSM 850 connected, connected to PC through RS232 cable:

Horizontal:



Frequency (MHz)	Antenna Polarization	Receiver QP Reading (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (cm)	Turntable Angle (°)
30	Horizontal	*	40	*	-	-
45	Horizontal	*	40	*	-	-
88	Horizontal	*	43.5	*	-	-
150	Horizontal	*	43.5	*	-	-
216	Horizontal	*	46	*	-	-
560	Horizontal	*	46	*	-	-
960	Horizontal	*	54	*	-	-
1000	Horizontal	*	54	*		

1. All readings are Peak values.

2. “\*” means the emission level is 6 dB below the relevant limit.

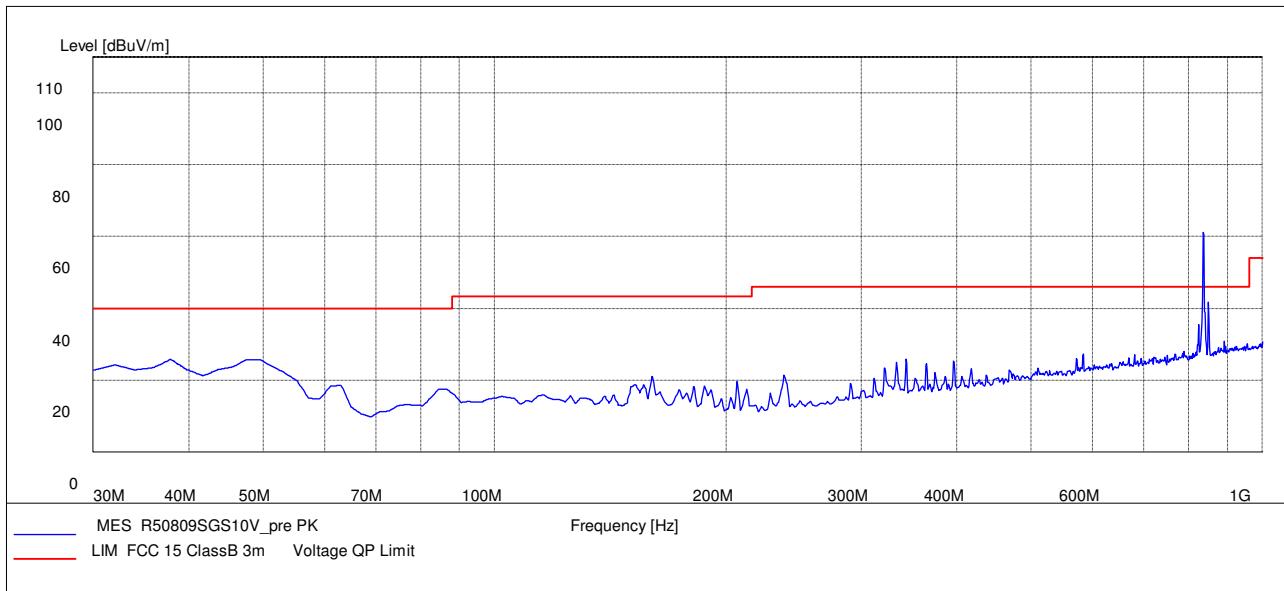
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Yishan Road, Xuhui District, Shanghai, China

Telephone: +86 (0) 21 6140 2666  
Fax: +86 (0) 21 5450 0954  
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Vertical:



Frequency (MHz)	Antenna Polarization	Receiver QP Reading (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (cm)	Turntable Angle (°)
30	Vertical	*	40	*	-	-
45	Vertical	*	40	*	-	-
88	Vertical	*	43.5	*	-	-
150	Vertical	*	43.5	*	-	-
216	Vertical	*	46	*	-	-
560	Vertical	*	46	*	-	-
960	Vertical	*	54	*	-	-
1000	Vertical	*	54	*		

**1. All readings are Peak values.**

**2. “\*” means the emission level is 6 dB below the relevant limit.**

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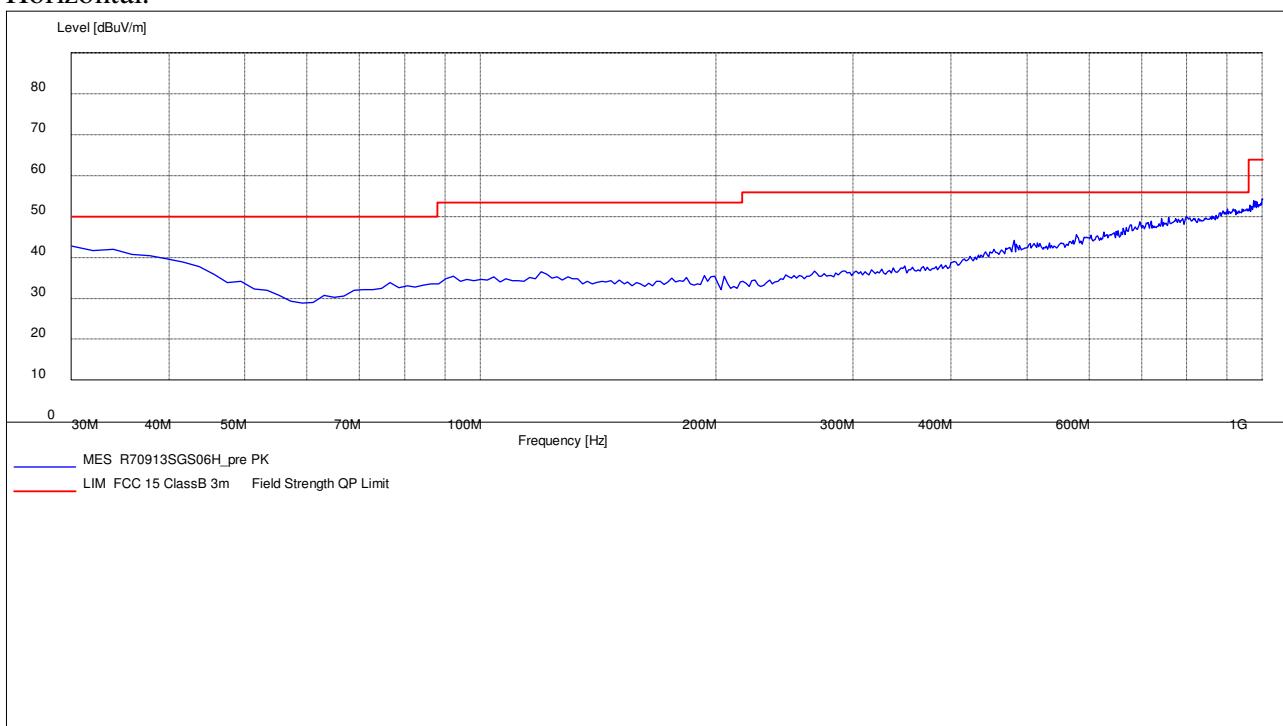
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Yishan Road, Xuhui District, Shanghai, China

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PCS 1900 connected, connected to PC through RS232 cable:

Horizontal:



Frequency (MHz)	Antenna Polarization	Receiver QP Reading (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (cm)	Turntable Angle (°)
30	Horizontal	*	40	*	-	-
45	Horizontal	*	40	*	-	-
88	Horizontal	*	43.5	*	-	-
150	Horizontal	*	43.5	*	-	-
216	Horizontal	*	46	*	-	-
560	Horizontal	*	46	*	-	-
960	Horizontal	*	54	*	-	-
1000	Horizontal	*	54	*		

**1. All readings are Peak values.**

**2. “\*” means the emission level is 6 dB below the relevant limit.**

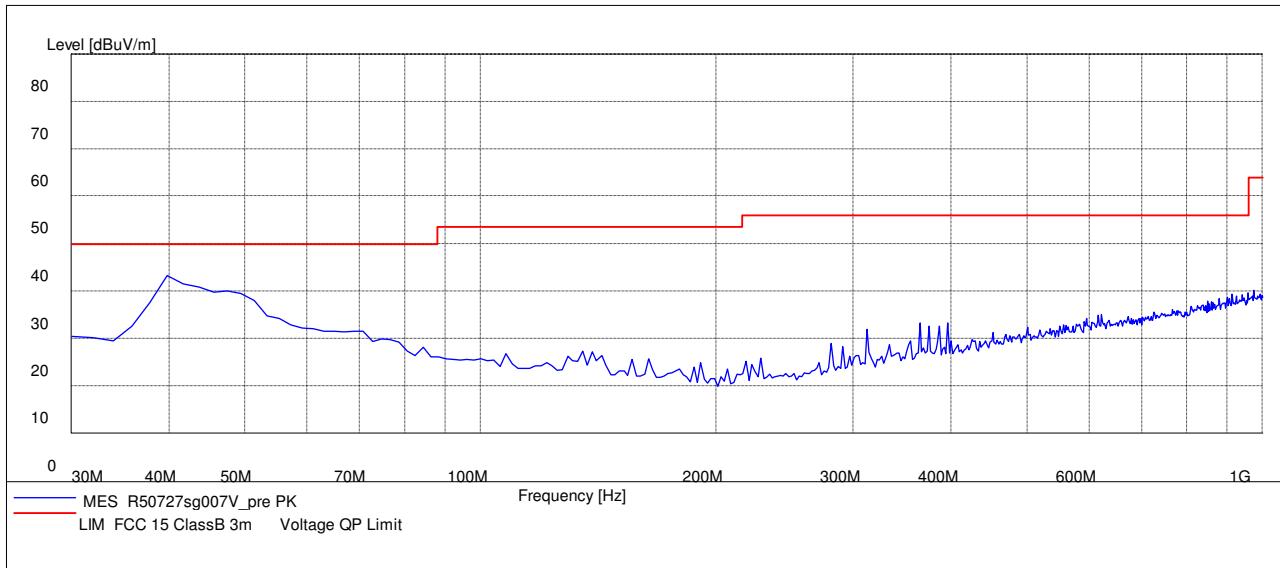
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Vertical:



Frequency (MHz)	Antenna Polarization	Receiver QP Reading (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (cm)	Turntable Angle (°)
30	Vertical	*	40	*	-	-
45	Vertical	*	40	*	-	-
88	Vertical	*	43.5	*	-	-
150	Vertical	*	43.5	*	-	-
216	Vertical	*	46	*	-	-
560	Vertical	*	46	*	-	-
960	Vertical	*	54	*	-	-
1000	Vertical	*	54	*		

1. All readings are Peak values.

2. “\*” means the emission level is 6 dB below the relevant limit.

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## **7 Photographs**

### **7.1 Radiated Emission Test Setup**



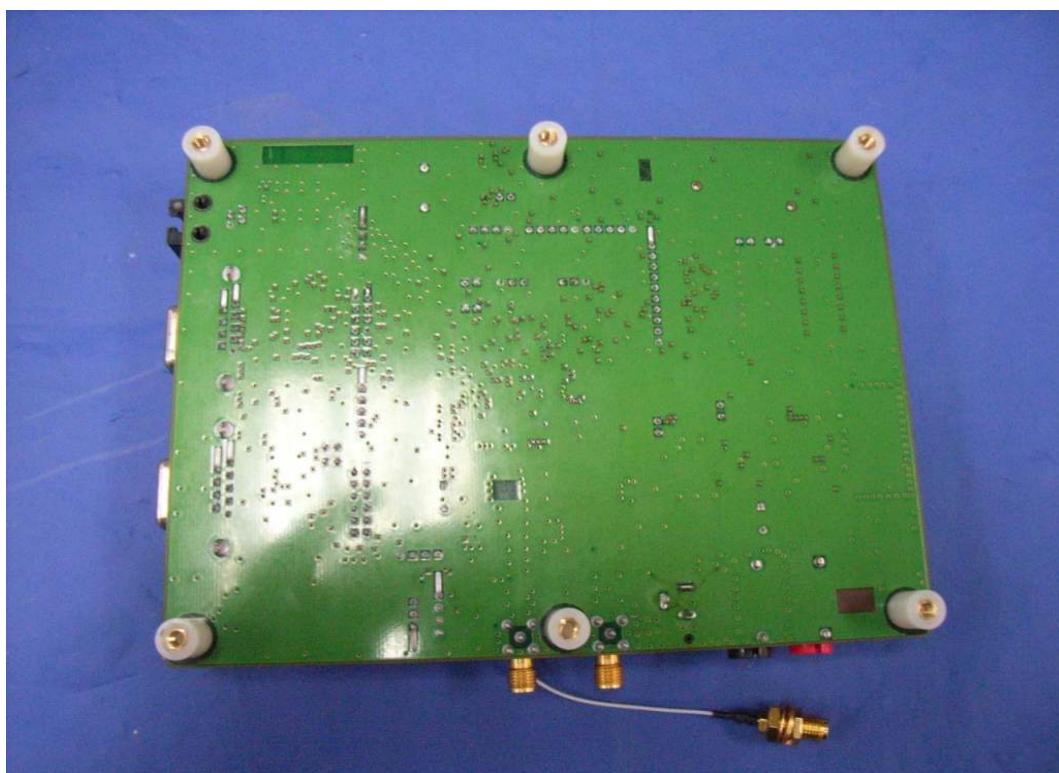
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## 8 EUT Constructional Details

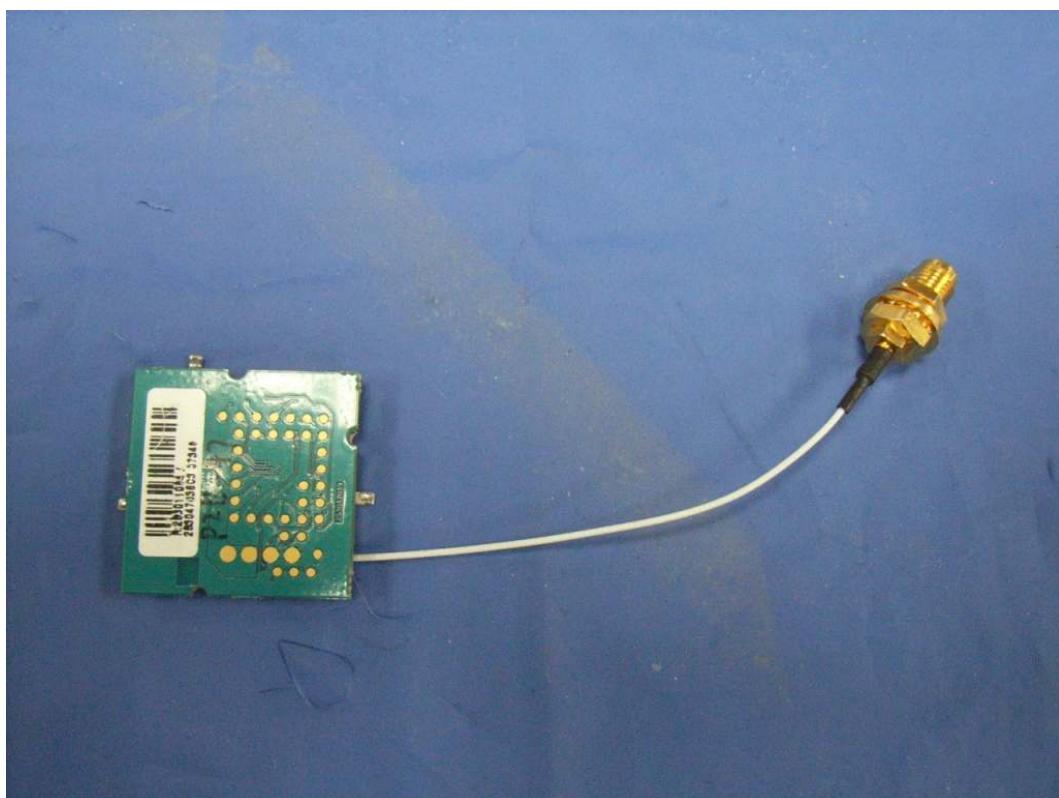
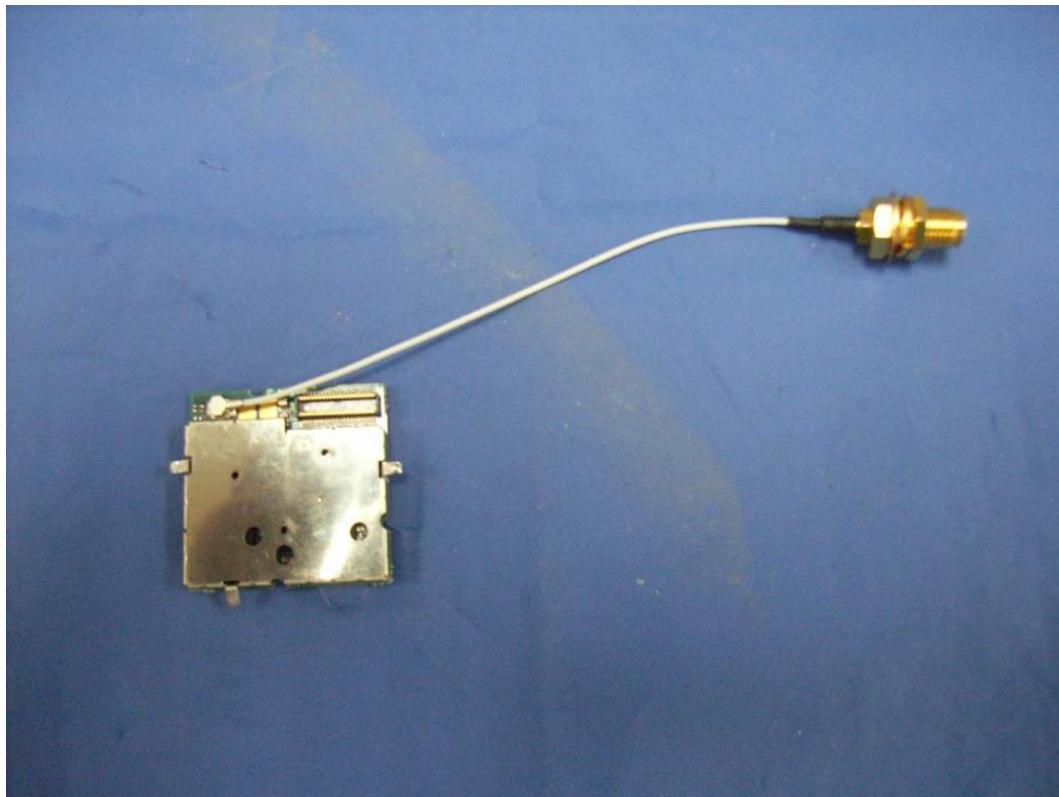


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RS232 Cable:



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## **APPENDIX 1**

### **LABELING REQUIREMENTS**

#### **§15.19 Labeling requirements.**

- (a) In addition to the requirements in part 2 of this chapter, a device subject to certification, or verification, or verification shall be labeled as follows:
  - (1) Receivers associated with the operation of a licensed radio service, e.g., FM broadcast under part 73 of this chapter, land mobile operation under part 90, etc., 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 condition that this device does not cause harmful interference.
  - (2) A stand-alone cable input selector switch, shall bear the following statement in a conspicuous location on the device:

This device is verified to comply with the part 15 of the FCC Rules for use with cable television service.
  - (3) All other devices 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.
  - (4) Where a device is constructed in two or more sections connected by wires and marketed together, the statement specified under paragraph (a) of this section is required to be affixed only to the main control unit.
  - (5) When the device is so small or for such use that it is not practicable to place the statement specified under paragraph (a) of this section on it, the information required by this paragraph shall be placed in a prominent location in the instruction manual or pamphlet supplied to the user or, alternatively, shall be placed on the container in which the device is marketed. However, the FCC identifier or the unique identifier, as appropriate, must be displayed on the device.
- (b) Products subject to authorization under a Declaration of Conformity shall be labeled as follows:
  - (1) The label shall be located in a conspicuous location on the device and shall contain the unique identification described in §2.1074 of this chapter and the following logo:

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(i) If the product is authorized based on testing of the product or system;  
or



(ii) If a personal computer is authorized based on assembly using  
separately authorized components, in accordance with §15.101(c) (2) or  
(c)(3), and the resulting product is not separately tested:



(2) Label text information should be in a size of type large enough to be readily legible, consistent with the dimensions of the equipment and the label. However, the type size for the text is not required to be larger than eight points.

(3) When the device is so small or for such use that it is not practicable to place the statement specified under paragraph (b)(1) of this section on it, such as for a CPU board or a plug-in circuit board peripheral device, the text associated with the logo may be placed in a prominent location in the instruction manual or pamphlet supplied to the user. However, the unique identification (trade name and model number) and the logo must be displayed on the device.

(4) The label shall not be a stick-on, paper label. The label on these products shall be permanently affixed to the product and shall be readily visible to the purchaser at the time of purchase, as, described in §2.925(d) of this chapter. "Permanently affixed" means that the label is etched, engraved, stamped, silk screen, indelibly printed, or otherwise permanently marked on a permanently attached part of the equipment or on a nameplate of metal, plastic, or other material fastened to the equipment by welding, riveting, or a permanent adhesive. The label must be designed to last the expected lifetime of the equipment in the environment in which the equipment may be operated and must not be readily detachable.