FCC TEST REPORT

# **FCC TEST REPORT**

for

# 47 CFR Part 24E

**Equipment: Smartphone** 

Model No. : My S-7

FCC ID : M9H95S2004

Filing Type: Certification

Applicant: SAGEM SA.

27 rue Leblanc 75512 Paris Cedex 15, France

Report No.: FG492412

- The test result refers exclusively to the test presented test model / sample.
- Without written approval of SPORTON International Inc., the test report shall not be reproduced except in full.
- Certificate or Test Report must not be used by the applicant to claim the product in this test report endorsement by NVLAP or any agency of U.S. government.

## SPORTON International Inc.

6F, No.106, Sec. 1, Hsin Tai Wu Rd., Hsi Chih, Taipei Hsien, Taiwan, R.O.C.

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The applicant has been cautioned as to the following:

15.21 Information to User.

The users manual or instruction manual for an intentional 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.

15.27(a) Special Accessories.

Equipment marketed to a consumer must be capable of complying with the necessary regulations in the configuration in which the equipment is marketed. Where special accessories, such as shielded cables and/or special connectors are required to enable an unintentional or intentional radiator to comply with the emission limits in this part, the equipment must be marketed with, i.e. shipped and sold with, those special accessories. However, in lieu of shipping or packaging the special accessories with the unintentional or intentional radiator, the responsible party may employ other methods of ensuring that the special accessories are provided to the consumer, without additional charge.

Information detailing any alternative method used to supply the special accessories for a grant of equipment authorization or retained in the verification records, as appropriate. The party responsible for the equipment, as detailed in § 2.909 of this chapter, shall ensure that these special accessories are provided with the equipment. The instruction manual for such devices shall include appropriate instructions on the first page of text concerned with the installation of the device that these special accessories must be used with the device. It is the responsibility of the user to use the needed special accessories supplied with the equipment.

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Required information per ISO/IEC Guide 25-1990, paragraph 13.2:

a) Test Report

b) Laboratory:

Sporton International Inc.

No.52, Hwa-Ya 1st RD., Hwa Ya Technology Park, Kwei-Shan

Hsiang, TaoYuan Hsien, Taiwan, R.O.C.

c) Report Number: FG492412

d) Client: SAGEM SA

27 rue Leblanc 75512 Paris Cedex 15, France

e) Identification:

Model Name: My S-7 FCC ID: M9H95S2004

Description:

GSM 1900 Radio

f) EUT Condition: Not required unless specified in individual tests.

g) Report Date:

Oct. 04, 2004

EUT Received: Sep. 24, 2004

h, j, k): As indicated in individual tests.

i) Sampling method: No sampling procedure used.

I) Uncertainty: In accordance with Sporton internal quality manual.

m) Supervised by:

Jones Tsai Oct/08/2004

n) Results: The results presented in this report relate only to the item tested.

o) Reproduction:

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permission from this laboratory.

Accessories Used During Testing:

Type

Model

EUT

My S-7

Earpiece TC-7025

## **List of General Information Required for Certification**

**Report No. : FG492412** 

In Accordance with FCC Rules and Regulations, Volume II, Part 2 and 24E, Confidentiality

#### **Sub-Part 2.1033**

(c)(1): Name and Address of Applicant:

SAGEM SA.

27 rue Leblanc 75512 Paris Cedex 15, France

Manufacturer

Mitac International Corp.

Mitac computer (Kunshan) Co., Ltd.

Kunshan Export Processing Zone, 215300

Jiangsu, People's Republic of China

(c)(2): FCC ID: M9H95S2004

Model Number: My S-7

(c)(3): Instruction Manual(s):

Please See Attached Exhibits

(c)(4): **Type of Emission**: 300 KGXW

(c)(5): FREQUENCY RANGE, MHz: 1850.2 to 1909.8

(c)(6): **Power Rating, Watts**: 1.000 (conducted)

0.383 (EIRP)

x Switchable Variable N/A

(c)(7): Maximum Power Rating, Watts: 1

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# Subpart 2.1033 (continued) (c)(8): Voltages & Currents in All Elements in Final RF Stage, Including Final Transistor or Solid State Device: Collector Current, A = 0.5 Collector Voltage, Vdc = 3.7 Supply Voltage, Vdc = (c)(9): Tune-Up Procedure: Please See Attached Exhibits (c)(10): Circuit Diagram/Circuit Description: Please See Attached Exhibits (c)(11): Label Information: Please See Attached Exhibits (c)(12): Photographs: Please See Attached Exhibits (c)(13): Digital Modulation Description: \_ Attached Exhibits <u>x</u> N/A (c)(14): Test and Measurement Data: **Follows**

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 Instead Date
 Oct. 04, 2004

# **Testimonial** and Statement of Certification

# This is to certify that:

- 1. That the application was prepared either by, or under the direct supervision of, the undersigned.
- 2. That the technical data supplied with the application was taken under my direction and supervision.
- 3. That the data was obtained on representative units, randomly selected.
- That, to the best of my knowledge and belief, the facts set forth in the application and accompanying technical data are true and correct.

Certified by:

Daniel Lee Manager

#### Certificate of NVLAP Accreditation



NVLAP-01C (06-01)

SPORTON International Inc.

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## Sub-part

# 2.1033(c)(14): Test and Measurement Data

All tests and measurement data shown were performed in accordance with FCC Rules and Regulations, Volume II; Part 2, Sub-part J, Sections 2.947, 2.1033(c), 2.1041, 2.1046, 2.1047, 2.1079, 2.1051, 2.1053, 2.1055, 2.1057 and the following individual Parts:

**Report No. : FG492412** 

22 – Public Mobile Services22 Subpart H - Cellular Radiotelephone Service

x 24 – Personal Communications Services

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# **General Information**

Product Feature & Specification							
4. Tx Frequency :	1850-1910MHz (PCS)						
5. Rx Frequency :	1930-1990MHz (PCS)						
6. Channel Spacing	200 kHz						
7. Maximum Output Power to Antenna :	30 dBm						
9. HW Version :	R07						
10. SW Version :	34						
11. Type of Modulation :	GMSK						
12. DUT Stage :	Identical Prototype						
13. Application Type :	Certification						

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#### **Standard Test Conditions**

#### and

## **Engineering Practices**

Except as noted herein, the following conditions and procedures were observed during the testing:

In accordance with TIA603, and unless otherwise indicated in the specific measurement results, the ambient temperature of the actual EUT was maintained within the range of  $10^{\circ}$  to  $40^{\circ}$ C ( $50^{\circ}$  to  $104^{\circ}$ F) unless the particular equipment requirements specify testing over a different temperature range. Also, unless otherwise indicated, the humidity levels were in the range of  $10^{\circ}$  to  $90^{\circ}$  relative humidity.

Prior to testing, the EUT was tuned up in accordance with the manufacturer's alignment procedures. All external gain controls were maintained at the position of maximum and/or optimum gain throughout the testing.

Measurement results, unless otherwise noted, are worst-case measurements.

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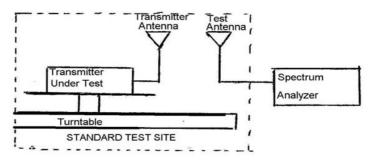
Name of Test: EIRP Carrier Power (Radiated)

**Specification**: TIA/EIA 603A (Substitution Method)

Definition: The average radiated power of device is the equivalent power required, when delivered to a substitution antenna, to produce at a distant point the same average received power as produced by the licensed device.

#### Method Of Measurement:

a) Connect the equipment as illustrated. Place the transmitter to be tested on the turntable in the standard test site.



b) Raise and lower the test antenna from 1m to 4m and rotate turntable from 0° to 360°. Record the highest received signal showed in spectrum analyzer as Rt . Calculate electric field strength in receive antenna as Et.

$$Et = Rt + AF$$

AF (dB/m): Receive Antenna Factor

c) Replace the transmitter under test with a substitution antenna. The center of the antenna should be at the same location as the transmitter under test. Connect the antenna to a signal generator with a known output power level Ps. Raise and lower the test antenna like in step b) and record the highest received signal showed in spectrum analyzer as R<sub>s</sub>. Calculate electric field strength in receive antenna as Es.

Es = Rs + AF

AF (dB/m): Receive Antenna Factor

d) Calculate radiated power as following:

EIRP = Ps + Et - Es + Gs

Ps (dBm): Input Power to Substitution Antenna

Gs (dBi): Substitution Antenna Gain

Results Attached

Tested By:

Tim Kao

SPORTON International Inc.

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<u>Test Results For</u>: EIRP Carrier Power (Radiated)

**Conducted Power** 

Bands	Channel	Frequency (MHz)	Conducted Power (dBm)	Conducted Power (Watts)
	512	1850.2 (Low)	29.8	0.955
GSM 1900	661	1880.0 (Mid)	29.8	0.955
	810	1909.8 (High)	30.0	1.000

# **EIRP**

Freq MHz	Pol	Substitution Antenna Input Power (dBm)	Substitution Antenna Gain (dBi)	⊨t	Es (dBuV/m)	Et - Es (dB)	Radiated Power (dBm)	Radiated Power (Watts)
1850.22	Н	-3.76	6.64	119.44	98.65	20.79	23.67	0.233
1880.07	Н	-3.78	6.65	120.20	98.59	21.61	24.48	0.281
1909.74	Н	-3.81	6.66	116.46	98.52	17.94	20.80	0.120
1850.29	V	-3.76	6.64	121.60	98.65	22.95	25.83	0.383
1879.94	V	-3.78	6.65	120.26	98.59	21.67	24.54	0.285
1909.87	V	-3.81	6.66	118.32	98.52	19.80	22.66	0.184

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#### GSM 1900 CH512 Horizontal Polarization



Trace: (Discrete)

Site : 03CH06-HY
Condition : 3m HF-HORN AH-118 HORIZONTAL

EUT Tri-band Mobile Phone 120Vac/60Hz Model · MY S-7 Memo : PCS Link CH512

Table Pos	Ant Pos			Preamp Factor					Level	Freq
deg	ст		dB	dB	dB/m	dBu₹	dBuV/m	dB	dBu∀/m	MHz
		Peak	0.00	0.00	27. 25	92.19			119.44	1850.22

## GSM 1900 CH512 Vertical Polarization



: 03CH06-HY Site

: 3m HF-HORN AH-118 VERTICAL Condition EUT

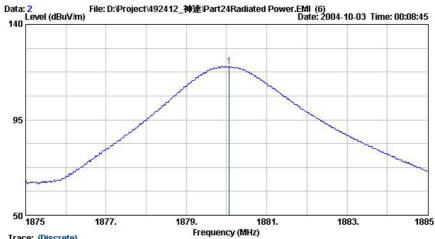
: Tri-band Mobile Phone : 120Vac/60Hz Power : MY S-7 : PCS Link CH512 ModelMemo

	Freq	Level					Preamp Factor	Loss Rema		Pos
	MHz	dBu∛/m	dB	dBuV/m	dBu∛	dB/m	dB	<u>dB</u>	сл	deg
1 @	1850.29	121.60			94.35	27. 25	0.00	0.00 Peak		

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#### GSM 1900 CH661 Horizontal Polarization



Trace: (Discrete)

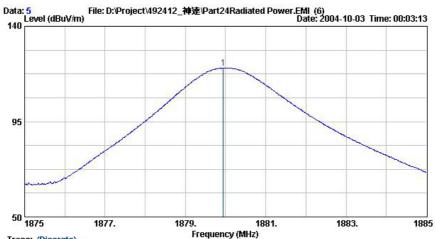
: 03CH06-HY

: 3m HF-HORN AH-118 HORIZONTAL Condition

EUT Tri-band Mobile Phone 120 Vac/60 HzModel · MY S-7 Memo : PCS Link CH661

Ant Table Loss Remark Pos dB dBu\/m dBu\ dB/m MHz dBuV/m dB dB deg CID 1880.07 120.20 ----- 92.78 27.42 0.00 0.00 Peak

#### GSM 1900 CH661 Vertical Polarization



Trace: (Discrete)

: 03CH06-HY Site

Condition EUT : 3m HF-HORN AH-118 VERTICAL

Tri-band Mobile Phone : 120Vac/60Hz Power : MY S-7 : PCS Link CH661 ModelMemo

	Freq	Level					Preamp Factor	Loss Rei	mark Pos	Pos
	MHz	dBu∛/m	dB	dBuV/m	dBu∛	dB/m	dB	dB	сп	deg
1 @	1879.94	120.26			92.85	27.42	0.00	0.00 Pea	ak	

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#### GSM 1900 CH810 Horizontal Polarization



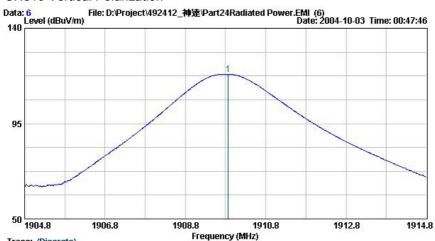
Trace: (Discrete)

: 03CH06-HY : 3m HF-HORN AH-118 HORIZONTAL Condition

EUT Tri-band Mobile Phone 120 Vac/60 HzModel · MY S-7 Memo : PCS Link CH810

Table Pos	Ant Pos			Preamp Factor					Level	Freq
deg	ст		dB	dB	dB/m	dBu₹	dBuV/m	dB	dBu∀/m	MHz
		Peak	0.00	0.00	27.58	88.88			116.46	1909.74

## GSM 1900 CH810 Vertical Polarization



Trace: (Discrete)

: 03CH06-HY Site

: 3m HF-HORN AH-118 VERTICAL Condition EUT

: Tri-band Mobile Phone : 120Vac/60Hz Power : MY S-7 : PCS Link CH810 ModelMemo

	Freq	Level					Preamp Factor		Remark	Ant Pos	Pos
	MHz	dBu∜/m	dB	dBuV/m	dBu∛	dB/m	dB	dB		сто	deg
l @	1909.87	118.32			90.73	27.58	0.00	0.00	Peak		

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Name of Test: Transmitter Conducted Measurements

Specification: 47 CFR 2.1051: Unwanted (spurious) Emissions

2.1049(c), 24.238(b): Occupied Bandwidth

24: Emissions at Band Edges

Test Equipment: As per attached page

#### **Measurement Procedure**

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- 1. The EUT and test equipment were set up as shown on the following page with the Spectrum Analyzer connected.
- 2. The low and high channels for all RF powers within the transmitting frequency band were measured.
- 3. Measurement Results: Attached

Tested By: Tim Kao

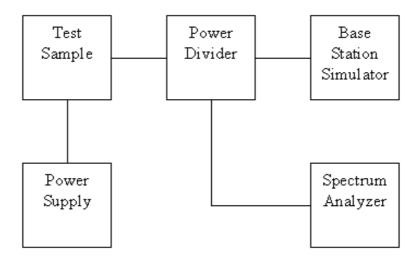
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# **Transmitter Spurious Emission**

Test A. Occupied Bandwidth (In-Band Spurious)

Test B. Out-of-Band Spurious

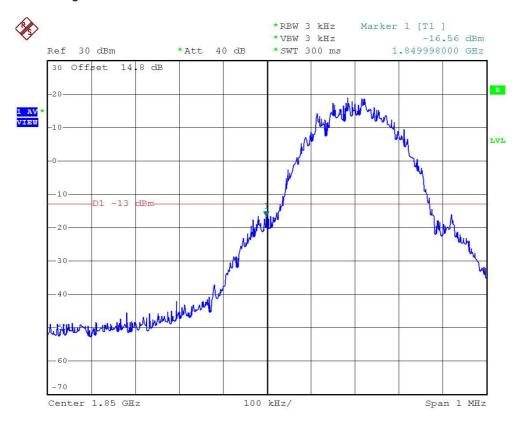


Asset	Model Name	S/N
Base Station Simulator	CMU200	102278
Base Station Simulator	E5515C	GB43460754
Spectrum Analyzer	FSP30	838858/014
AC/DC Power Source	HPA-500W	HPA0100024

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Name of Test: Emission Masks (Occupied Bandwidth) State 2:High Power



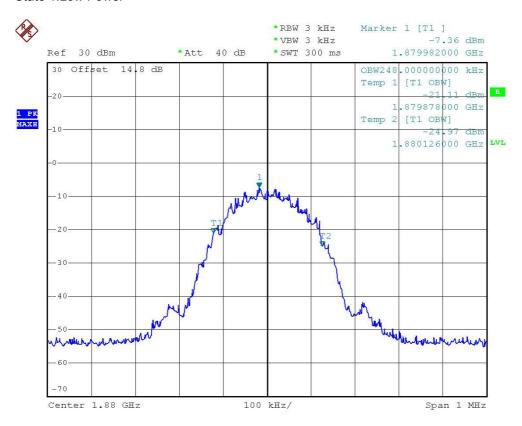
Date: 3.OCT.2004 19:31:18

Power: HIGH Modulation: GSM 1900

LOWER BAND EDGE

TEL: 886-2-2696-2468 FAX: 886-2-2696-2255

Name of Test: Emission Masks (Occupied Bandwidth) State 1:Low Power



Date: 3.OCT.2004 19:28:38

Power: LOW Modulation: GSM 1900

99% BANDWIDTH

FCC ID

Page No.

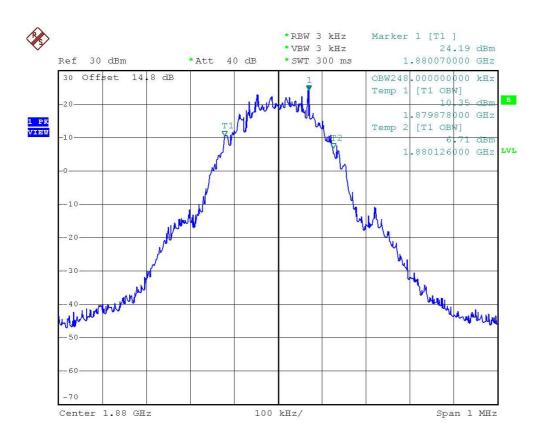
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TEL: 886-2-2696-2468 FAX: 886-2-2696-2255

Name of Test: Emission Masks (Occupied Bandwidth) State 2:High Power



Date: 3.OCT.2004 19:27:10

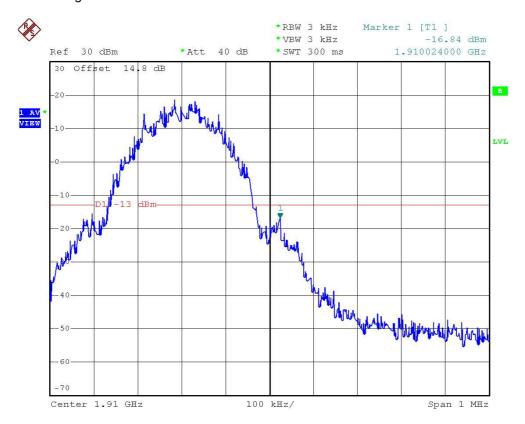
Power: HIGH Modulation: GSM 1900

99% BANDWIDTH

TEL: 886-2-2696-2468 FAX: 886-2-2696-2255

Issued Date Oct. 04, 2004

Name of Test: Emission Masks (Occupied Bandwidth) State 2:High Power



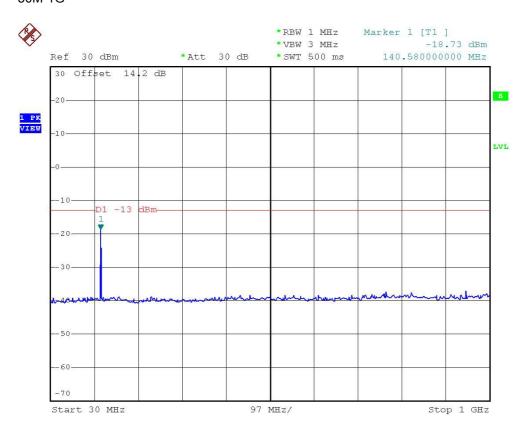
Date: 3.OCT.2004 19:32:29

Power: HIGH Modulation: GSM 1900

**UPPER BAND EDGE** 

TEL: 886-2-2696-2468 FAX: 886-2-2696-2255

Name of Test: Conducted Spurious Emission GSM 1900 CH661 30M-1G



Date: 3.0CT.2004 19:45:14

TEL: 886-2-2696-2468 FAX: 886-2-2696-2255