



MPE REPORT

Report No.: SRMC2009-H024-E0003

Product Name: GSM/GPRS Module

Product Model: CM-G100

Applicant: Inventec Appliances (Jiangning) Corporation

Manufacture: Inventec Appliances (Jiangning)

Corporation

Specification: FCC Part2.1093,

OET Bulletin 65 Supplement C[June 2001]

FCC ID: UPMJGW200001

The State Radio Monitoring Center

State Radio Spectrum Monitoring and Testing Center

No.80 Beilishi Road Xicheng District Beijing, China

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1. General information

1.1 Notes of the test report

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The test results relate only to individual items of the samples which have been tested.

1.2 Information about the testing laboratory

Company: The State Radio Monitoring Center
State Radio Spectrum Monitoring and Testing Center
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1.3 Applicant's details

Company: Inventec Appliances (Jiangning) Corporation
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Grantee Code: UPM
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1.4 Manufacturer's details

Company: Inventec Appliances (Jiangning) Corporation
Address: Jiangning Economic and Technological Development Zone
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Country or Region: P.R.China
Grantee Code: UPM
Contacted person: William Zhang
Tel: +86 25 52262313
Fax: +86 25 52218366
Email: zhang.hui-liang@inventec-inc.com

1.5 Application details

Date of reception of test sample: 1st Dec 2008

Date of test: 1st Dec 2008 to 17th June 2009

1.6 Reference specification

FCC Part2.1093, OET Bulletin 65 Supplement C [June 2001]

1.7 Information of EUT

1.7.1 General information

Name of EUT	GSM/GPRS Module
FCC ID	UPMJGW200001
Frequency range	PCS1900: Tx:1850~1910MHz Rx:1930~1990MHz
Rated output power	30.0dBm
E.I.R.P.	27.50dBm
Modulation type	GMSK
Emission Designator	300KGXW
Duplex mode	FDD
Duplex spacing	80MHz
Antenna type	Integral
Power Supply	USB docking card
Rated Power Supply Voltage	3.8V
Extreme Temperature	Lowest: -30°C Highest: +50°C
Extreme Voltage	Minimum: 3.6V Maximum: 4.2V
HW Version	2A
SW Version	1.00

1.7.2 EUT details

Name	Model	IMEI
GSM/GPRS Module	CM-G100	35980002000000

1.7.3 Auxiliary equipment details

Equipment	USB docking card
Manufacturer	Inventec Appliances (Jiangning) Corporation
Model Number	---

Equipment	Notebook
Manufacturer	IBM
Model Number	T23


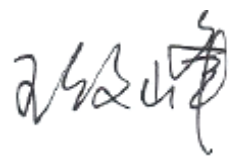

2. Test information:

2.1 Summary of the calculation results:

No.	Test case	FCC reference	Verdict
1	MPE Calculation	FCC Part2.1093, OET Bulletin 65 Supplement [June 2001]	Pass

*Note: The device CM-G100 (FCC ID: UPMJGW200001) is designed as module to be installed in other devices. This device is to be used only for fixed and mobile applications. If the final product after integration is intended for portable use, a new application and FCC is required.

The antenna(s) used for this transmitter must be installed to provide a separation distance of at least 20cm from all the persons and must not be co-located or operating in conjunction with any other antenna or transmitter.

This Test Report Is Issued by: Mr. Song Qizhu, Director of the test lab 	Checked By: 
Tested By: 	Issued date: 17th June 2009

2.2 Calculation result

2.2.1 Maximum Permissible Exposure (MPE)

Limit:

FCC LIMITS FOR MAXIMUM PERMISSIBLE EXPOSURE (MPE)

(A) Limits for Occupational/Controlled Exposure

Frequency Range (MHz)	Electric Field Strength (E) (V/m)	Magnetic Field Strength (H) (A/m)	Power Density (S) (mW/cm ²)	Averaging Time E ² , H ² or S (minutes)
0.3-3.0	614	1.63	100*	6
3.0-30	1842/f	4.89/f	(900/f ²) *	6
30-300	61.4	0.163	1.0	6
300-1500	--	--	f/300	6
1500-100,000	--	--	5	6

(B) Limits for General Population/Uncontrolled Exposure

Frequency Range (MHz)	Electric Field Strength (E) (V/m)	Magnetic Field Strength (H) (A/m)	Power Density (S) (mW/cm ²)	Averaging Time E ² , H ² or S (minutes)
0.3-1.34	614	1.63	100*	30
1.34-30	824/f	2.19/f	(180/f ²)*	30
30-300	27.5	0.073	0.2	30
300-1500	--	--	f/1500	30
1500-100,000	--	--	1.0	30

f = frequency in MHz *Plane-wave equivalent power density

Calculation procedure:

In accordance with 47CFR FCC Part 2.1091, the product has been defined as a mobile device where a distance of 0.2m normally can be maintained between the user and product.

Calculation formula:

$$\text{Power Density: } P_d (\text{W/m}^2) = E^2/377$$

$$E (\text{V/m}) = (30 \cdot P \cdot G)^{0.5} / d$$

E: Electric Field Strength (V/m)

P: Peak RF Output Power (W)

G: Antenna Numeric Gain (Numeric)

d: Separation Distance Between the Radiator and Human Body (m)

So the calculation formula can be changed as:

$$P_d = (30 * P * G) / (377 * d^2)$$

Calculation result:

Channel No.	Effective Isotropic Radiated Power (E.I.R.P.) (mW)	Power Density (S) (mW/cm2)	Limit of Power Density (S) (mW/cm2)	Verdict
512	549.5	0.1093	1.0	Pass
661	562.3	0.1119	1.0	Pass
810	549.5	0.1093	1.0	Pass