

RADIO FREQUENCY RADIATION EXPOSURE REPORT

Mobiles /Fixed Base Station Maximum Permissible Exposure (MPE)

OF

Product Name: SkyGuard

Brand Name: SkyGuard

Marketing Name: N/A

Model Name: GVT-1000

FCC ID: MEUSKYGUARD

Report No.: ER/2008/30007

Issue Date: Mar. 28, 2008

Prepared for: Yield Technology Co., Ltd.
No5-7 Shia Shin Nan, Chungli (320) Taoyuan
Taiwan

Prepared by: SGS Taiwan Ltd.
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VERIFICATION OF COMPLIANCE

Applicant: Yield Technology Co., Ltd.
No5-7 Shia Shin Nan, Chungli (320) Taoyuan Taiwan

Product Name: SkyGuard

FCC ID Number: MEUSKYGUARD

Brand Name: SkyGuard

Marketing Name: N/A

Model No.: GVT-1000

Model Difference: N/A

File Number: ER/2008/30007

Date of test: Mar. 06, 2008 ~ Mar. 07, 2008

Date of EUT Received: Mar. 05, 2008

We hereby certify that:

The above equipment was tested by SGS Taiwan Ltd., Electronics & Communication Laboratory. The test data, data evaluation, test procedures, and equipment configurations shown in this report were made in accordance with the procedures given in FCC OET Bulletin 65 Supplement C and 47 CFR §2.1091.

The test results of this report relate only to the tested sample identified in this report.

Test By:

Jazz Huang

Date

Mar. 21, 2008

Jazz Huang / Engineer

Prepared By:

Gigi yeh

Date

Mar. 21, 2008

Gigi Yeh / Clerk

Approved By:

Vincent Su

Date

Mar. 21, 2008

Vincent Su/Manager

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Version

Version No.	Date
00	Mar. 21, 2008

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Table of Contents

1.	GENERAL INFORMATION	5
1.2	RELATED SUBMITTAL(S) / GRANT (S)	6
1.3	SPECIAL ACCESSORIES	6
1.4	EQUIPMENT MODIFICATIONS	6
1.5	LIMITATION	6
1.6	MAXIMUM PERMISSIBLE EXPOSURE (MPE) EVALUATION	7
	PHOTOGRPHS OF EUT.....	9

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1. GENERAL INFORMATION

Product Name:	SkyGuard		
Model Name:	GVT-1000		
Market name:	N/A		
Model Difference:	N/A		
Brand Name:	SkyGuard		
Simple Hands-Free (SHF):	N/A		
Power Supply:	3.7 Vdc re-chargeable battery or 12Vdc for Car charger		
	Battery Model:	N/A	
	Adapter Model:	N/A	

GSM:

Cellular Phone Standards Frequency Range and Power	GSM/GPRS 850	824 MHz– 849MHz	33 dBm
	GSM/GPRS 1900	1850MHz – 1910MHz	30 dBm
Type of Emission	GSM: 300KGXW		
IMEI	352023006424739		

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1.2 Related Submittal(s) / Grant (s)

This submittal(s) (test report) is intended to comply with Section Part 22, subpart H and part 15.247 of the FCC CFR 47 Rules. For 47 CFR 1.1310 Radio frequency Radiation Exposure requirement.

1.3 Special Accessories

Not available for this EUT intended for grant.

1.4 Equipment Modifications

Not available for this EUT intended for grant.

1.5 Limitation

Frequency Range (MHz)	Electric Field Strength (V/m)	Magnetic Field Strength (A/m)	Power Density (mW/cm ²)	Averaging Time (minute)
Limits for General Population/Uncontrolled Exposure				
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
1500-15000	/	/	1.0	30

F = frequency in MHz

* = Plane-wave equipment power density

1.6 Maximum Permissible Exposure (MPE) Evaluation

In this application we seek modular approval to the SkyGuard GSM/GPRS/EDGE class10 module. Based on the FCC OET Bulletin 65 Supplement C and 47 CFR §2.1091, we have concluded that the GVT-1000 module will comply with the FCC rules on RF exposure for mobile devices if the antenna gain does not exceed 3.06 dBd in cellular band and 0.23 dBi in PCS band. The following analysis will demonstrate such compliance. The analysis will be done in two US bands.

Operation in cellular band (824 – 849 MHz)

The peak conducted output power of SkyGuard in cellular band is 31.20 dBm at GSM/GPRS mode. Take the worst case as an example, in which an antenna with 3.06dBd gain is used. The resulted power density at a distance of 20 cm can be deducted as follows:

$$\text{EIRP} = 31.20 + (3.06) + 2.14 = 36.4 \text{ dBm} = 4365.16 \text{ mW}$$

$$\begin{aligned} \text{Power Density} &= \text{EIRP} * \text{Duty Cycle} / (4 * R^2) \\ &= 4365.16 * 0.25 / (4 * 20^2) = 0.217 \text{ mW/cm}^2 \end{aligned}$$

where Duty Cycle is 0.25 for GPRS operation (class 10) and R is 20 cm.

The MPE limit for General Population/Uncontrolled Exposure is shown in the FCC OET Bulletin 65 Supplement C and can be calculated as follows:

$$\text{MPE limit} = 824 / 1500 = 0.55 \text{ mW/cm}^2$$

As we can see the resulted power density is below the MPE limit, therefore SkyGuard module in cellular band is compliant with the FCC rules on RF exposure.

Operation in PCS band (1850 – 1910 MHz)

The peak conducted output power of SkyGuard module in PCS band is 29.10 dBm. Take the worst case as an example, in which an antenna with 0.23 dBi gain is used. The resulted ERP can be expressed as follows:

$$\text{ERP} = 29.10 + (0.23) - 2.14 = 27.19\text{dBm} (0.5236 \text{ W}) < 3 \text{ W}$$

The FCC OET Bulletin 65 Supplement C states that mobile devices identified in 47 CFR §2.1091 that operate at frequencies above 1.5 GHz with an ERP of 3.0 watts or more are required to perform routine environmental evaluation for RF exposure prior to equipment authorization or use; otherwise, they are categorically excluded.

As we can see this resulted ERP is below 3 W, therefore routine environmental evaluation for RF exposure prior to equipment authorization or use for SkyGuard module in PCS band is categorically excluded.

APPENDIX 1

PHOTOGRPHS OF EUT

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All of EUT



Front View of EUT



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Back View of EUT*Site View of EUT - 1*

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Site View of EUT – 2*Site View of EUT – 3*

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Site View of EUT – 4



Open View of EUT – 1



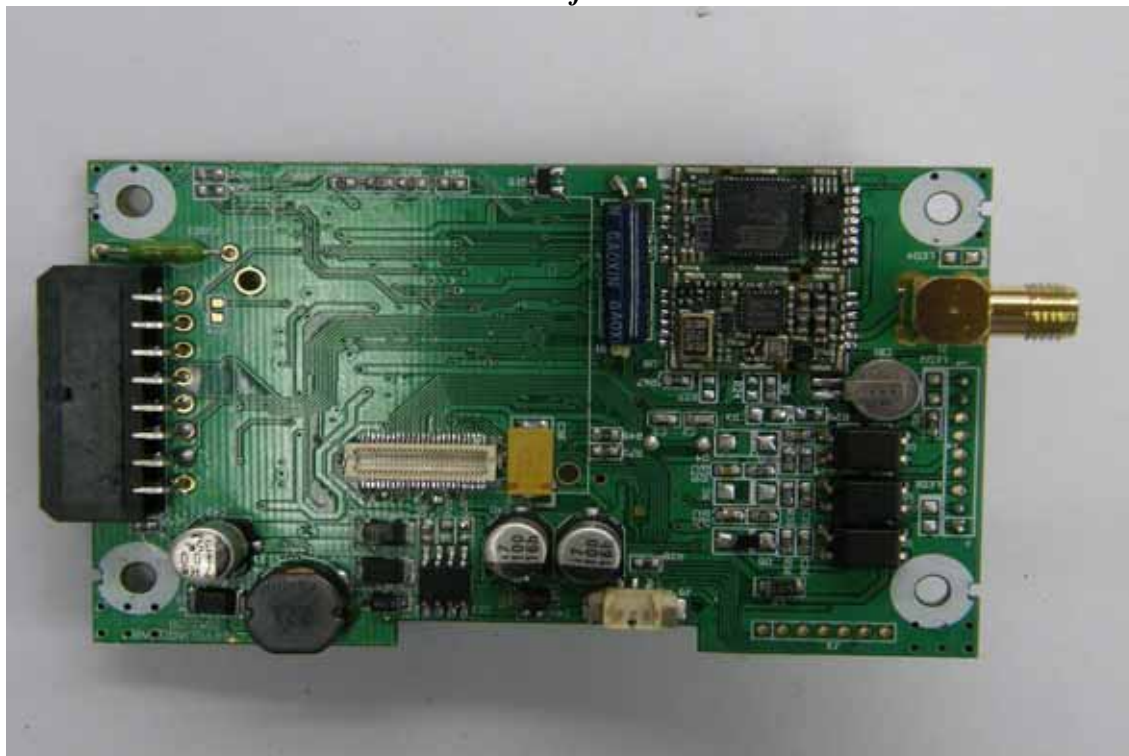
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GPS
Antenna
Port

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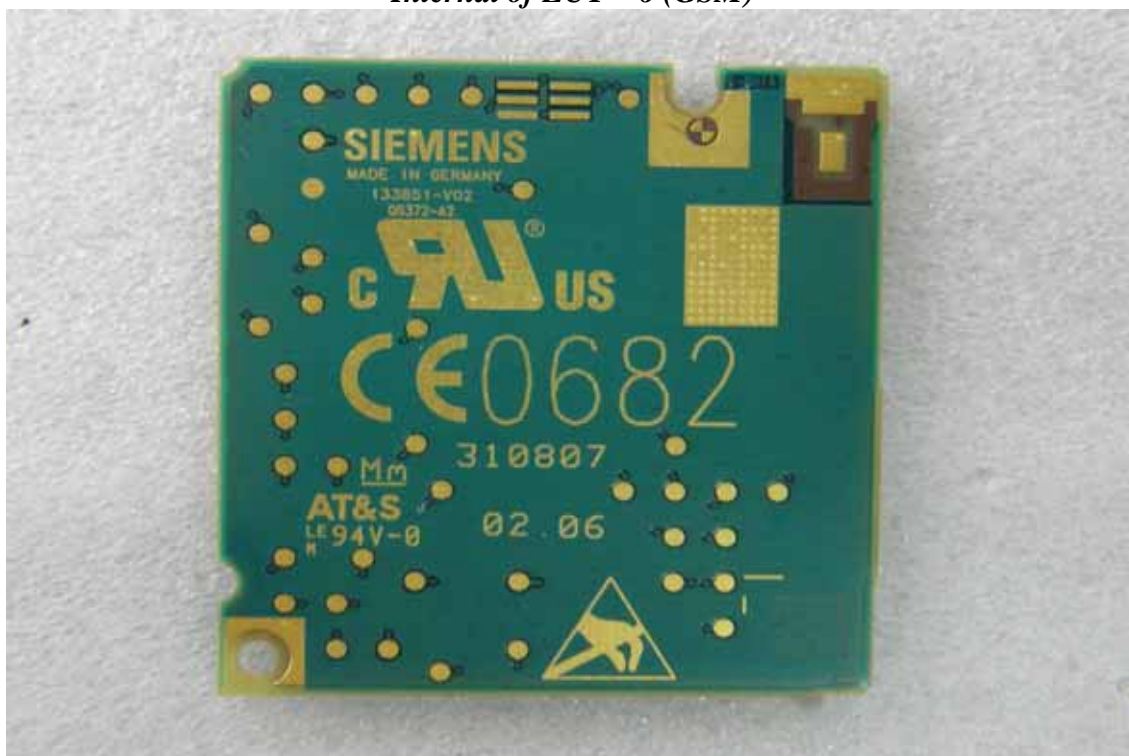
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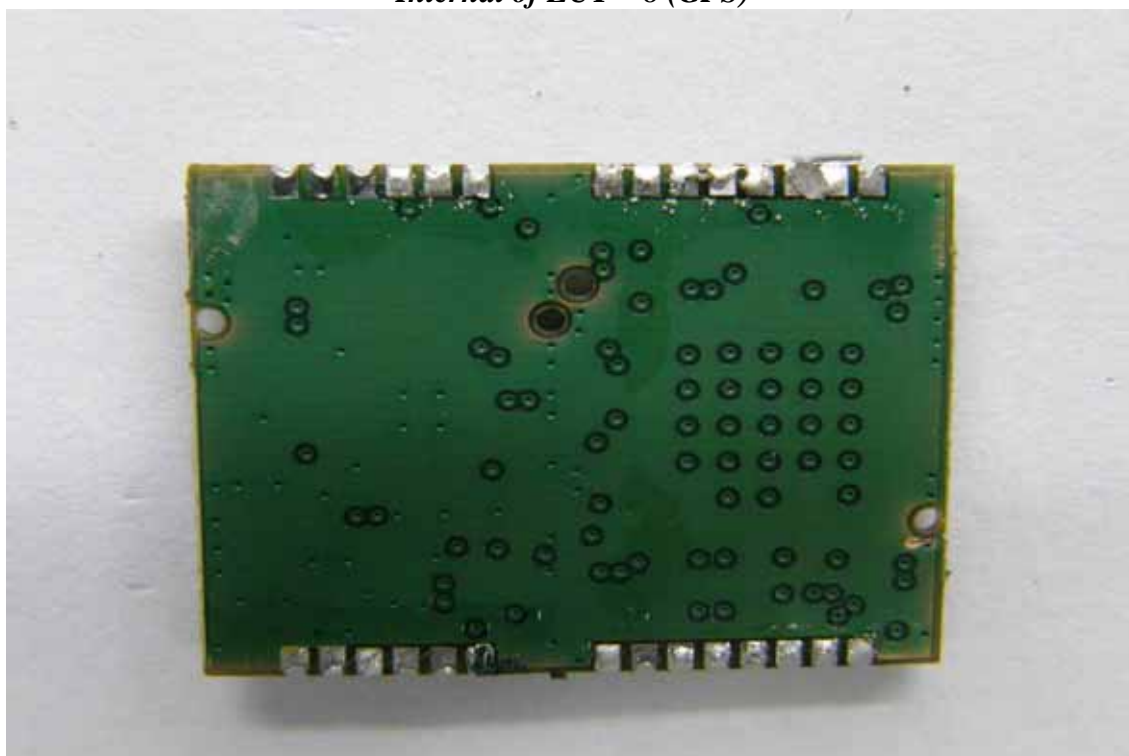
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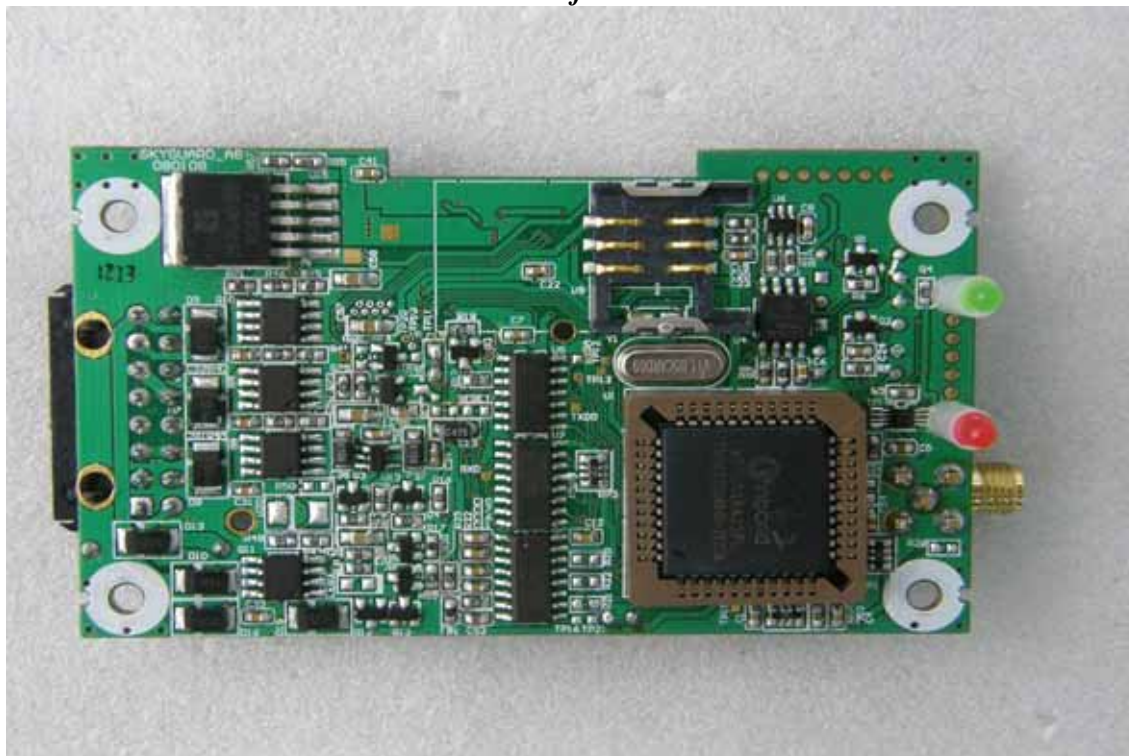
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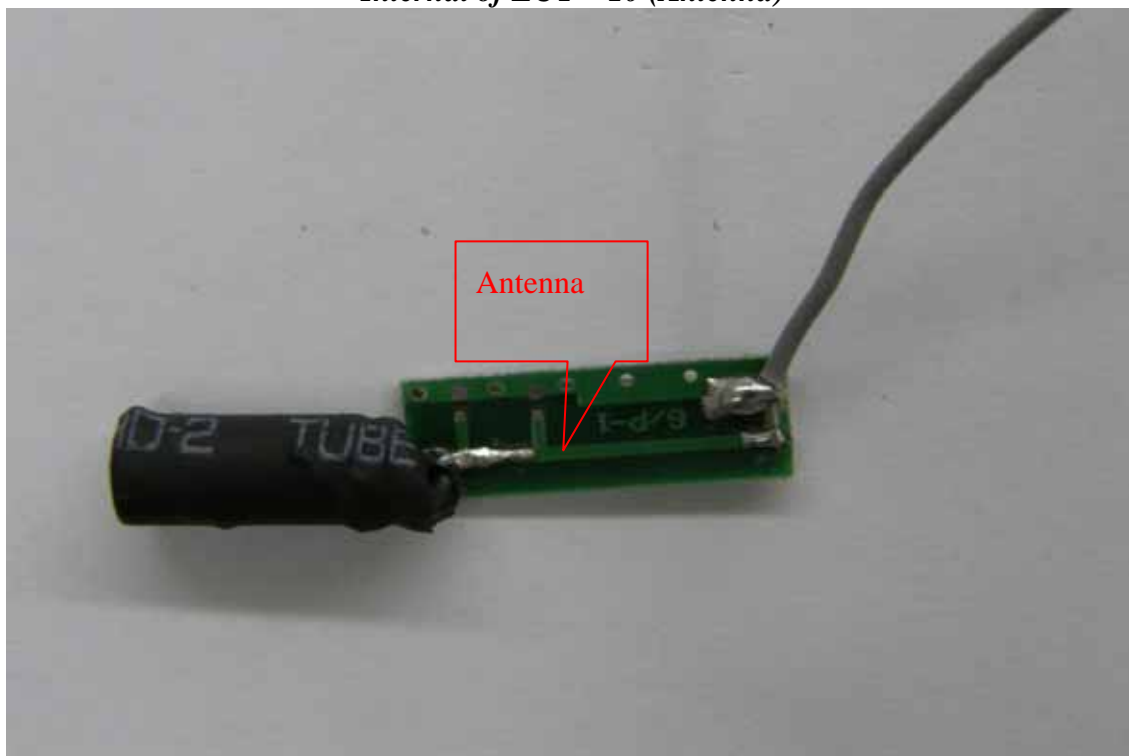
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