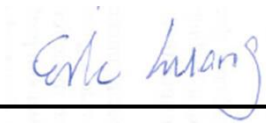
RF Exposure Evaluation Report

APPLICANT	:	**shenzhen huaqiang information industry co. ltd.**
EQUIPMENT	:	**GPS Terminal**
BRAND NAME	:	**huaqiang**
MODEL NAME	:	**V37**
FCC ID	:	**2ADRZHQ6006AV37**
STANDARD	:	**47 CFR Part 2.1091**

We, SPORTON INTERNATIONAL (SHENZHEN) INC., would like to declare that the device has been evaluated in accordance with 47 CFR Part 2.1091, and pass the limit. Without written approval of SPORTON INTERNATIONAL (SHENZHEN) INC., the test report shall not be reproduced except in full.



Reviewed by: Eric Huang / Deputy Manager

Approved by: Jones Tsai / Manager

SPORTON INTERNATIONAL (SHENZHEN) INC.

1F & 2F,Building A, Morning Business Center, No. 4003 ShiGu Rd., Xili Town, Nanshan District, Shenzhen, Guangdong, P. R. China

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Revision History

REPORT NO.	VERSION	DESCRIPTION	ISSUED DATE
FA492307	Rev. 01	Initial issue of report	Dec. 09, 2014

1. Administration Data

1.1. Testing Laboratory

Testing Laboratory	
Test Site	SPORTON INTERNATIONAL (SHENZHEN) INC.
Test Site Location	1F & 2F, Building A, Morning Business Center, No. 4003 ShiGu Rd., Xili Town, Nanshan District, Shenzhen, Guangdong, P. R. China TEL: +86-755-8637-9589 FAX: +86-755-8637-9595

Applicant	
Company Name	shenzhen huaqiang information industry co. ltd.
Address	west 2F, 3 BLD. #1 miexiu Rd., futian, shezhen, china

Manufacturer	
Company Name	shenzhen huaqiang information industry co. ltd.
Address	west 2F, 3 BLD. #1 miexiu Rd., futian, shezhen, china

2. Description of Equipment Under Test (EUT)

Product Feature & Specification	
EUT Type	GPS Terminal
Brand Name	huaqiang
Model Name	V37
FCC ID	2ADRZHQ6006AV37
Wireless Technology and Frequency Range	GSM850: 824.2 MHz ~ 848.8 MHz GSM1900: 1850.2 MHz ~ 1909.8 MHz
Mode	GSM/GPRS
Antenna Type	External Quad-band Antenna
HW Version	V37_MB_P21
SW Version	V37-7.4.106.4
EUT Stage	Production Unit

Remark: The above EUT's information was declared by manufacturer. Please refer to the specifications or user's manual for more detailed description.

3. Maximum RF average output power among production units

Mode	GSM 850	GSM 1900
	Average power(dBm)	
GSM (GMSK, 1 Tx slot)	33	31.5
GPRS (GMSK, 1 Tx slot)	33	31.5
GPRS (GMSK, 2 Tx slots)	33	31.5

4. RF Exposure Limit Introduction

According to ANSI/IEEE C95.1-1992, the criteria listed in Table 1 shall be used to evaluate the environmental impact of human exposure to radio frequency (RF) radiation as specified in §1.1310.

Frequency range (MHz)	Electric field strength (V/m)	Magnetic field strength (A/m)	Power density (mW/cm^2)	Averaging time (minutes)
(A) Limits for Occupational/Controlled Exposures				
0.3-3.0	614	1.63	*(100)	6
3.0-30	1842/f	4.89/f	*(900/f2)	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				
0.3-1.34	614	1.63	*(100)	30
1.34-30	824/f	2.19/f	*(180/f2)	30
30-300	27.5	0.073	0.2	30
300-1500			f/1500	30
1500-100,000			1.0	30

The MPE was calculated at 20 cm to show compliance with the power density limit.

The following formula was used to calculate the Power Density:

$$S = \frac{PG}{4\pi R^2}$$

Where:
S = Power Density
P = Output Power at Antenna Terminals
G = Gain of Transmit Antenna (linear gain)
R = Distance from Transmitting Antenna

5. Radio Frequency Radiation Exposure Evaluation

5.1. Standalone Power Density Calculation

Band	Frequency (MHz)	Antenna Gain (dBi)	Maximum Power (dBm)	Maximum EIRP (dBm)	Maximum EIRP (W)	Maximum output power Limit (W)	Average EIRP (mW)	Power Density at 20cm (mW/cm2)	Limit (mW/cm2)
GSM 850 (1 Tx slot)	824.2	2.00	33	35.0	3.16	7.0	398.11	0.08	0.55
GPRS 850 (1 Tx slot)	824.2	2.00	33	35.0	3.16	7.0	398.11	0.08	0.55
GPRS 850 (2 Tx slots)	824.2	2.00	33	35.0	3.16	7.0	794.33	0.16	0.55
GSM 1900 (1 Tx slot)	1850.2	2.00	31.5	33.5	2.24	2.0	281.84	0.06	1.00
GPRS 1900 (1 Tx slot)	1850.2	2.00	31.5	33.5	2.24	2.0	281.84	0.06	1.00
GPRS 1900 (2 Tx slots)	1850.2	2.00	31.5	33.5	2.24	2.0	562.34	0.11	1.00

Note: For conservativeness, the lowest uplink frequency of each band is used to determine the MPE limit of that band

Conclusion:

According to 47 CFR §2.1091, the RF exposure analysis concludes that the RF Exposure is FCC compliant.