
MPE REPORT

Report No.: SRMC2009-H024-E0021

Product Name: Broadband Wireless Desktop Terminal

Product Model: SkyWay-Mobile CPE

Applicant: Solectek Corporation

Manufacture: Solectek Corporation

Specification: FCC Part2.1093,

OET Bulletin 65 Supplement [June 2001]

FCC ID: KA370MOB2

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: Solectek Corporation
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USA
City: San Diego
Country or Region: USA
Grantee Code: KA3
Contacted person: David Gell
Tel: +1-858-450-1220-3020
Fax: +1-858-457-2681
Email: dgell@solectek.com

1.4 Manufacturer's details

Company: Solectek Corporation
Address: 6370 Nancy Ridge Drive, Suite 109, San Diego, CA 92121,
USA
City: San Diego
Country or Region: USA
Grantee Code: KA3
Contacted person: David Gell
Tel: +1-858-450-1220-3020
Fax: +1-858-457-2681
Email: dgell@solectek.com

1.5 Application details

Date of reception of test sample: 20th July. 2008

Date of test: 20th July. 2008 to 5th Aug. 2008

1.6 Reference specification

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

1.7 Information of EUT

1.7.1 General information

Name of EUT	Broadband Wireless Desktop Terminal
FCC ID	KA370MOB2
Frequency Range	698MHz ~ 746MHz
Rated Output Power	21.71dBm (ERP)
Access Method	CS-OFDMA
Modulation Type	QPSK, 8PSK, 16QAM, 64QAM
Emission Designator	1M00W9W
Duplex mode	TDD
Channel Bandwidth	1MHz
Antenna Type	External
Antenna Gain	2.5dBi
Power Supply	External power supply
Rated Power Supply Voltage	5V
Extreme Temperature	Lowest: 0°C Highest: +50°C
Extreme Voltage	Minimum: 4.25V Maximum: 5.75V
HW Version	CPE_M.PCB 72.20.00.00
SW Version	CPE.om.1.4.5.9

1.7.2 EUT details

Name	Model	Serial Number
Broadband Wireless Desktop Terminal	SkyWay-Mobile CPE	C5C0810011360A

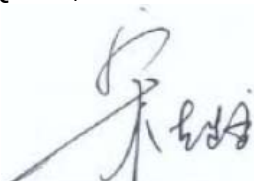
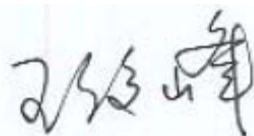
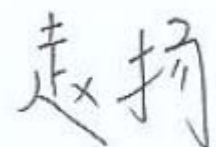
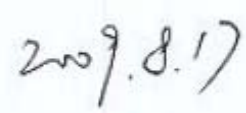
1.7.3 Auxiliary equipment details

Equipment	Power supply
Manufacturer	Shi Jiazhuang Guoyao Electronic
Model Number	UE15W1-050200SPAU
Serial Number	-----

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

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

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:

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

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

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:

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

Calculation result:

Modulation Type: QPSK

Channel Frequency (MHz)	Effective Isotropic Radiated Power (E.I.R.P.) (mW)	Power Density (S) (mW/cm2)	Limit of Power Density (S) (mW/cm2)	Verdict
699	132.2	0.0263	0.466	Pass
721	191.9	0.0382	0.481	Pass
745	233.3	0.0464	0.497	Pass

Modulation Type: 8PSK

Channel Frequency (MHz)	Effective Isotropic Radiated Power (E.I.R.P.) (mW)	Power Density (S) (mW/cm2)	Limit of Power Density (S) (mW/cm2)	Verdict
699	173.0	0.0344	0.466	Pass
721	160.7	0.0320	0.481	Pass
745	242.1	0.0482	0.497	Pass

Modulation Type: 16QAM

Channel Frequency (MHz)	Effective Isotropic Radiated Power (E.I.R.P.) (mW)	Power Density (S) (mW/cm2)	Limit of Power Density (S) (mW/cm2)	Verdict
699	113.8	0.0226	0.466	Pass
721	217.3	0.0432	0.481	Pass
745	251.8	0.0501	0.497	Pass

Modulation Type: 64QAM

Channel Frequency (MHz)	Effective Isotropic Radiated Power (E.I.R.P.) (mW)	Power Density (S) (mW/cm2)	Limit of Power Density (S) (mW/cm2)	Verdict
699	14.52	0.0029	0.466	Pass
721	37.76	0.0075	0.481	Pass
745	1.035	0.0002	0.497	Pass