Elliott

EMC Test Data

Client:	Handspring	Job Number:	J 42594
Model:	Visor Edge with Visor Phone	T-Log Number:	T42595
		Proj Eng:	Mark Briggs
Contact:	David Waitt		
Emissions Spec:	FCC Pt. 24	Class:	
Immunity Spec:		Environment:	

EMC Test Data

For The

Handspring

Model

Visor Edge with Visor Phone

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TEST SUMMARY

Date	Test Performed	Level	Results	Margin
3/20/2001	RE, 1.8GHZ-18GHz MHz - Spurious	FCC Part 24	Pass	-8dB @ 5.726MHz

Abbreviations Used: RE - Radiated Emissions, CE- Conducted Emissions, RI - Radiated Immunity, CI - Conducted Immunity, ESD - Electrostatic Discharge, EFT - Electrical Fast Transients, VDI - Voltage Dips and Interrupts

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EUT INFORMATION

General Description

The EUT is a celular Phone module for the Visor palm device which is designed to provide portable phone access. Normally, the EUT would be placed on a table top during operation. The EUT was, therefore, treated as table-top equipment during testing to simulate the end user environment.

Equipment Under Test

Manufacturer	Model	Description	Serial Number	FCC ID
Handspring	Visor Phone	cellular phone	none	

Other EUT Details

EUT Enclosure

The EUT enclosure is primarily constructed of plastic. The enclosure of the viwer that it is inserted into is aluminium.

Modification History

Mod. #	Test	Date	Modificaiton
1			
2			
3			

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Test Configuration #1

Local Support Equipment

Manufacturer	Model	Description	Serial Number	FCC ID
Handspring	Visor Edge	PDA	none	DoC
Handspring		Cradle / Power Supply	none	DoC
Wavetek	4201S	Communication Test Set	L0113595	-

Remote Support Equipment

Manufacturer	Model	Description	Serial Number	FCC ID
None				

EUT Interface Ports

		Cable(s)		
EUT Port	Connected To	Description	Shielded or Unshielded	Length(m)
Data	Visor data	Direct connect		
DC in	Serial connector	2 wire	Unshielded	
Data in	Serial connector	multi wire	Shielded	2

EUT Operation During Emissions

The EUT was transmitting continously

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Spec:	FCC Pt. 24	Class:	N/A

Radiated Emissions

Test Specifics

Objective: The objective of this test session is to perform engineering evaluation testing of the EUT with respect to the specification listed above.

Date of Test: 3/20/2001
Test Engineer: Chris Byleckie
Test Location: SVOATS #3

Config. Used: 1
Config Change: none
Host Unit Voltage 120V/60Hz

General Test Configuration

The EUT and all local support equipment were located on the turntable for radiated spurious emissions testing.

For radiated emissions testing the measurement antenna was located 3 meters from the EUT.

bh

Ambient Conditions:

Temperature: 26°C
Rel. Humidity: 39%

Summary of Results

Run #	Test Performed	Limit	Result	Margin
1	RE, 1.8GHZ-18GHz MHz - Spurious Emissions	FCC Part 24	Pass	-8dB @ 5.726MHz

Modifications Made During Testing:

No modifications were made to the EUT during testing

Deviations From The Standard

No deviations were made from the requirements of the standard.

Modifications Made During Testing: None

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Spec:	FCC Pt. 24	Class:	N/A

Run #1: Radiated Spurious Emissions, 3.8-19.1GHz MHz. High Channel @ 1.9098 C 1.9089

	H	V
Fundamental emission level @ 3m in 1 M RBW:	128	124
Limit for emissions outside of restricted bands [note 1]:	82.2 dBµV/m	

Frequency	Level	Pol	PT. 24		Detector	Azimuth	Height	Comments
GHz	dBµV/m	v/h	Limit	Margin	Pk/QP/Avg	degrees	meters	
1.9100	68.9	h	82.2	-13.3	PK			Band Edge
1.9100	68.5	v	82.2	-13.7	PK	0	1.0	Band Edge
3.8178	73.6	h	82.2	-8.6	PK	93	1.3	
3.8178	73.8	v	82.2	-8.4	PK	190	1.3	
5.7267	74.2	h	82.2	-8.0	PK	291	1.0	
5.7267	73.4	v	82.2	-8.8	PK	350	1.1	
7.6356	70.9	h	82.2	-11.3	PK	116	1.0	
7.6356	68.3	v	82.2	-13.9	PK	69	1.4	
9.5445	73.2	h	82.2	-9.0	PK	51	1.0	
9.5445	68.8	v	82.2	-13.4	PK	120	1.0	
11.4534	67.4	h	82.2	-14.8	PK	85	1.4	
11.4534	64.4	v	82.2	-17.8	PK	43	1.1	
13.3623	67.5	h	82.2	-14.7	PK	80	1.3	
13.3623	68.9	v	82.2	-13.3	PK	293	1.0	
15.2712	57.4	h	82.2	-24.8	PK	50	1.1	
15.2712	63.9	v	82.2	-18.3	PK	348	1.1	
17.1801	61.1	h	82.2	-21.1	PK	72	1.1	
17.1801	61.4	v	82.2	-20.8	PK	11	1.3	
19.0890	56.5	h	82.2	-25.7	PK	0	1.0	
19.0890	56.5	v	82.2	-25.7	PK	0	1.0	

Note 1:	A Pout of 1 W, the manufacturers stated maximum power, was used for the spurious limit calculation

EIRP and ERP measurements

Frequency	Level	Pol	Substitution [Note 1]				Comments
MHz	dBµV/m	v/h	Pin	Gain	EIRP	ERP	
1909.800	128.0	h	21.5	7.3	28.8	26.6	
1909.800	65.4	v	20.5	7.3	27.8	25.6	

Note 1:	Pin is the power input (dBm) to the substitution antenna to obtain the field strength recorded from the EUT. G is the gain (dBi) for the substitution antenna.ERP is the effective radiated power (Pin + GdBi - 2.2) from the substitution antenna. EIRP is calculated as follows (Pin+GdBi)

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Revision History

All revisions below 1.0 are to be considered as draft. Revisions may only be made by those with the relevant experience, i.e. technical changes must be made by, or with the approval of a member of the technical staff. Spelling and typographical errors may be corrected without changing revision number.

Rev #	Made By	Date	Comments