ELECTRO-MAGNETIC COMPATIBILITY

EMC TEST REPORT

FOR

PALM, INC.

DUAL-BAND PCS/CELLULAR CDMA-2000 PHONE
WITH
BLUETOOTH

MODEL: TREO XXX

FCC ID: O8F93001

IC: 3905A-93001

Test Report Serial Number

121405O8F-T705-E24C

Test Report Issue No.

E705C-020306-R0

Test Lab

Celltech Compliance Testing & Engineering Lab
(Celltech Labs Inc.)
1955 Moss Court
Kelowna, BC
Canada
V1Y 9L3

DECLARATION OF COMPLIANCE

Test Lab

CELLTECH LABS INC.
Testing and Engineering Services
1955 Moss Court
Kelowna, B.C.
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web site: www.celltechlabs.com

Applicant

PALM, INC.
950 West Maude Avenue
Sunnyvale, CA 94085-2801
United States

Lab Registration No.(s):	FCC:	714830			IC:	3874		
Rule Part(s):	FCC:	§2	§22H	§24E	IC:	RSS-133 Issue 3	RSS-132 Issue 2	
Device Classification:	FCC:	PCS Licensed Transmitter held to ear (PCE)						
	IC:	2 GHz Personal Communication Services (RSS-133 Issue 3) 800 MHz Cellular Telephones Employing New Technologies (RSS-132 Issue 2)						
Device Identification:	FCC ID:	08F93001			IC:	3905A-93001		
DUT Description:								
Model:	Treo XXX							
Device Description:	Portable Dual-Band PCS/Cellular CDMA-2000 Phone with Bluetooth							
Tx Frequency Range(s):	Cellular CDMA	824.70 - 848.31 MHz						
	PCS CDMA	1851.25 - 1908.75 MHz						
Maximum RF Conducted Output Power Levels Measured:	Cellular CDMA	Ch. 1013	23.8 dBm 0.240 W	Ch. 384	24.4 dBm 0.275 W	Ch. 777	24.2 dBm 0.263 W	
	PCS CDMA	Ch. 25	23.8 dBm 0.240 W	Ch. 600	24.7 dBm 0.295 W	Ch. 1175	24.0 dBm 0.251 W	
Max. ERP Measured:	25.67 dBm	0.369 W	848.31 MHz		Cellular CDMA Band			
Max. EIRP Measured:	24.06 dBm	0.254 W	1880.00 MHz		PCS CDMA Band			
Emission Designator:	1M25F9W							
Antenna Type(s):	External Fixed Stubby							
Power Source(s):	Stationary: Switching Power Supply (Model: DSC-51F-52P US; P/N: 14-0028-02)							
	3.7 VDC Lithium-ion Battery (P/N: 157-10014-00)							

This wireless device has demonstrated compliance with the applicable technical standards as indicated in the measurement report and was tested in accordance with the measurement procedures specified in FCC 47 CFR Rule Parts 2, 22H, 24E; Industry Canada RSS-132 Issue 2, RSS-133 Issue 3; and ANSI TIA/EIA-603-C-2004.

I attest to the accuracy of the data. All measurements reported herein were performed by me or were under my supervision and are correct to the best of my knowledge and belief. I assume full responsibility for the completeness of these measurements and vouch for the qualifications of all persons taking them.

Tested By:	Reviewed By:
Spencer Watson	
Spencer Watson **Senior Compliance Technologist** **Celltech Labs Inc.**	**Duane M. Friesen** **EMC Manager** **Celltech Labs Inc.**

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FIGURES

PHOTOGRAPHS

TEST SUMMARY

Appendix	Test Description	Procedure Reference	Limit Reference	Test Start Date	Test End Date	Result
Referenced Standard: FCC CFR Title 47 Part 2, 22H						
B	Conducted RF Output Power	§2.1046	§2.1046	14Dec05	14Dec05	Pass
C	Occupied Bandwidth	§2.1049	§2.202	14Dec05	14Dec05	Pass
D	Conducted TX Spurious Emissions	§22.917(b)	§22.917(a)	15Jan06	15Jan06	Pass
E	Effective Radiated Power	ANSI/TIA/EIA-603-C	§22.913	10Jan06	15Jan06	Pass
F	Radiated TX Spurious Emissions	ANSI/TIA/EIA-603-C	§22.917 (e)	10Jan06	15Jan06	Pass
Referenced Standard: FCC CFR Title 47 Part 2, 24E						
G	Conducted RF Output Power	§2.1046	§2.1046	14Dec05	14Dec05	Pass
H	Occupied Bandwidth	§2.1049	§2.202	14Dec05	14Dec05	Pass
I	Conducted TX Spurious Emissions	§24.238(b)	§24.238(a)	15Jan06	15Jan06	Pass
J	Effective Isotropic Radiated Power	ANSI/TIA/EIA-603-C	§24.232(b)	10Jan06	15Jan06	Pass
K	Radiated TX Spurious Emissions	ANSI/TIA/EIA-603-C	§24.238 (a)	10Jan06	15Jan06	Pass
Referenced Standard: IC RSS-132 Issue 2						
B	Conducted RF Output Power	RSS-Gen §4.6	SRSP-503 §5.1	14Dec05	14Dec05	Pass
C	Occupied Bandwidth	FCC CFR 47 §2.1049	RSS-132 §4.2	14Dec05	14Dec05	Pass
D	Conducted TX Spurious Emissions	RSS-Gen §4.7	RSS-132 §4.5	15Jan06	15Jan06	Pass
E	Effective Radiated Power	ANSI/TIA/EIA-603-C	SRSP-503 §5.1	10Jan06	15Jan06	Pass
F	Radiated TX Spurious Emissions	RSS-Gen §4.7	RSS-132 §4.5	10Jan06	15Jan06	Pass
L	Conducted RX Spurious Emissions	RSS-Gen §4.8	RSS-Gen §6 (b)	18Jan06	18Jan06	Pass
Referenced Standard: IC RSS-133 Issue 3						
G	Conducted RF Output Power	ANSI/TIA/EIA-603-C	SRSP-510 §5.1.2	14Dec05	14Dec05	Pass
H	Occupied Bandwidth	FCC CFR 47 §2.1049	RSS-133 §6.2	14Dec05	14Dec05	Pass
I	Conducted TX Spurious Emissions	RSS-Gen §4.7	RSS-133 §6.5	15Jan06	15Jan06	Pass
J	Effective Isotropic Radiated Power	ANSI/TIA/EIA-603-C	RSS-133 §6.4	10Jan06	15Jan06	Pass
K	Radiated TX Spurious Emissions	RSS-Gen §4.7	RSS-133 §6.5	10Jan06	15Jan06	Pass
M	Conducted RX Spurious Emissions	RSS-133 §4.5	RSS-133 §6.7 (b)	18Jan06	18Jan06	Pass

REVISION LOG

Issue No.	Description	Implemented By	Implementation Date
E705C-020306-R0	Initial Release	Jonathan Hughes	February 03, 2006

SIGNATORIES

Prepared By:		January 19, 2006
Name/Title	Duane M. Friesen, C.E.T. / EMC Manager	Date
Approved By:		February 03, 2006
Name/Title	Jonathan Hughes / General Manager	Date

1.0 SCOPE

This report outlines the measurements made and results collected during electromagnetic emissions testing of the Palm Treo XXX Dual-Band CDMA-2000 Phone FCC ID: O8F93001. The measurement results were applied against the applicable EMC requirements and limits outlined in the technical rules and regulations set forth in the Federal Communications Commission's Code of Federal Regulations Title 47 Parts 2, 22 Subpart H, and 24 Subpart E; and Industry Canada Radio Standards Specifications RSS-132 Issue 2, and RSS-133 Issue 3.

2.0 REFERENCES

2.1 Normative References

ANSI/ISO 17025:1999	General Requirements for competence of testing and calibration laboratories
IEEE/ANSI C63.4:2003	Methods of Measurement of Radio-Noise Emissions from Low-Voltage Electrical and Electronic Equipment in the Range of 9 kHz to 40 GHz
IEEE/ANSI Std C95.1:1999	American National Standard Safety Levels with Respect to Human Exposure to Radio Frequency Electromagnetic Fields
ANSI/TIA/EIA-603-C:2004	Land Mobile FM or PM Communication Equipment Measurement and Performance Standards
CFR Title 47 Part 2:2004	Code of Federal Regulations Title 47: Telecommunication Part 2: Frequency Allocations and Radio Treaty Matters; General Rules and Regulations Part 22: Public Mobile Services Part 24: Personal Communication Services
IC Spectrum Management & Telecommunications Policy	Radio Standards Specification RSS-102 Issue 2 - Evaluation Procedure for Mobile and Portable Radio Transmitters with respect to Health Canada's Safety Code 6 for Exposure of Humans to Radio Frequency Fields RSS-132 Issue 2 - 800 MHz Cellular Telephones Employing New Technologies RSS-133 Issue 3 - 2 GHz Personal Communication Services SRSP-503 Issue 6 - Technical Requirements for Cellular Radiotelephone Systems Operating in the Bands 824 - 849 MHz and 869 - 894 MHz SRSP-510 Issue 3 - Technical Requirements for Personal Communications Services in the Bands 1850-1910 MHz and 1930-1990 MHz

3.0 TERMS AND DEFINITIONS

AV	Average
CDMA	Code Division Multiple Access
CFR	Code of Federal Regulations
dB	decibel
dBm	dB referenced to 1 mW
dBuV	dB referenced to 1 uV
DUT	Device under Test
dBc	dB down from carrier
EBW	Emission Bandwidth
EIRP	Effective Isotropic Radiated Power
EDGE	Enhanced Data Rates for CDMA Evolution
EMC	Electromagnetic Compatibility
ERP	Effective Radiated Power
EV-DO	Evolution - Data Only
FCC	Federal Communication Commission
FHSS	Frequency Hopping Spread Spectrum
FPC	Flexible Printed Circuit
CDMA	Global Systems for a Mobility Communication
GPRS	General Packet Radio Service
HP	Hewlett Packard
HPF	High Pass Filter
Hpol	Horizontal Polarization
Hz	Hertz
IC	Industry Canada
kHz	kilohertz
LNA	Low Noise Amplifier
m	meter
MHz	Megahertz
Mbps	megabits per second
na	not applicable
n/a	not available
PK	Peak
PPSD	Peak Power Spectral Density
QP	Quasi-peak
RBW	Resolution Bandwidth
R&S	Rohde & Schwarz
RSS	Radio Standard Specification
RX	Receiver
SA	Spectrum Analyzer
TX	Transmitter
VBW	Video Bandwidth
Vpol	Vertical Polarization
WLAN	Wireless Local Area Network

4.0 FACILITIES AND ACCREDITATIONS

The facilities used in collecting the test results outlined in this report are located at 1955 Moss Court, Kelowna, British Columbia, Canada, V1Y 9L3. The radiated and conducted emissions sites conform to the requirements set forth in ANSI C63.4 and are filed and listed with the FCC under Registration Number 714830 and Industry Canada under File Number IC 3874.

5.0 GENERAL INFORMATION

5.1 Applicant Information

Company Name:	**Palm, Inc.**
Address:	950 West Maude Avenue
	Sunnyvale, CA 94085
	United States

5.2 DUT Description

The DUT consisted of the Treo XXX wireless phone.

Device:	Dual-Band PCS/Cellular CDMA-2000 Phone with Bluetooth			
Model:	Treo XXX			
Test Sample Serial No.:	VC1CUBX50184			
Identifier(s):	FCC ID:	08F93001	IC:	3905A-93001
Rule Part(s):	FCC:	§22.913; §22.917; §24.232; §24.238		
	IC:	RSS-132 Issue 2; RSS-133 Issue 3		
Classification(s):	FCC:	- PCS Licensed Transmitter held to ear (PCE)		
	IC:	- 800 MHz Cellular Telephones employing New Technologies (RSS-132)		
		- 2 GHz Personal Communication Services (RSS-133)		
Power Source:	Stationary: Switching Power Supply (Model: DSC-51F-52P US; P/N: 14-0028-02)			
	Lithium-ion Battery 3.7 VDC (P/N: 157-10014-00)			

5.3 Co-Located Equipment

Type:	Bluetooth Transmitter with Internal PIFA Antenna

5.4 Cable Descriptions

ROUTING		Length	Model	Terminations		Shield Type	Shield Termination		Suppression
From	To	m		End 1	End 2		End 1	End 2	
none									

5.5 Support Equipment

The following equipment was used in support of the DUT.

Co-located Support Equipment List		
Manufacturer	**Model**	**Description**
Generic	n/a	Ear-Microphone

5.6 Mode(s) of Operation Tested

5.6.1 Dual-Band CDMA-2000 Phone

A CDMA Communications Test Set was used to set the Treo XXX phone to the appropriate channel and maximum power level for the specific measurement. Measurements were made with the phone set to the low, mid and high channel in each band or on a worst-case channel for the measurement, as determined by prescan evaluations. The following settings were used for each channel.

5.6.1.1 Cellular CDMA

Transmit Frequency Range:	824.70 - 848.31 MHz Ch. 1013 (824.70 MHz) (low), Ch. 384 (835.89 MHz) (mid) & Ch. 777 (848.31 MHz) (high) measured unless otherwise noted
Software Power Gain Settings:	Set by CDMA communications test set for "all ups"
Emission Designator(s):	1M25F9W

5.6.1.2 PCS CDMA

Transmit Frequency Range:	1851.25 - 1908.75 MHz Ch. 25 (1851.25 MHz) (low), Ch 600 (1880.00 MHz) (mid) & Ch. 1175 (1908.75 MHz) (high) measured unless otherwise noted
Software Power Gain Settings:	Set by CDMA communications test set for "all ups"
Emission Designator(s):	1M25F9W

5.6.2 DUT Exercising Software Description

The DUT was configured and exercised during the testing using the CDMA communications test set in "all ups" mode. For the conducted testing, the communications test set signal was fed to the antenna port via a directional coupler. For the radiated testing the communications test set was connected to a transmit antenna placed near the DUT.

6.0 PASS/FAIL CRITERIA

Unless otherwise noted in the Appendices, the pass/fail criterion is the limit set forth in the reference standards. A DUT is considered to have passed the requirements, if the data collected during the described measurement procedure is within the specified limits as defined. The pass/fail statements made in this report only apply to the unit tested.

APPENDICES

Appendix A - Intentionally Blank

Appendix B - Cellular Band Conducted TX RF Output Power Measurement

B.1. REFERENCES

Normative Reference Standard	FCC CFR 47 §2.1046
Procedure Reference	FCC CFR 47 §2.1046

B.2. LIMITS

FCC CFR 47 §2.1046 (a)	For transmitters other than single sideband, independent sideband and controlled carrier radiotelephone, power output shall be measured at the RF output terminals when the transmitter is adjusted in accordance with the tune-up procedures to give the values of current and voltage on the circuit elements specified in §2.1033(c) (8).

*ERP limits are specified in Appendix E.

B.3. ENVIRONMENTAL CONDITIONS

Temperature	25 ± 5 ºC
Humidity	35 ± 5 %RH
Barometric Pressure	uncontrolled

B.4. EQUIPMENT LIST

ASSET NUMBER	MANUFACTURER	MODEL	DESCRIPTION	LAST CAL	CAL DUE
00008	Gigatronics	8652A	Power Meter	29Apr05	29Apr06
00014	Gigatronics	80701A	Power Sensor	07Sep05	07Sep06
00114	AR	DC7154	Directional coupler	na	na*
Customer Supplied	Palm	na	Cable & SMA adapter	na	na*
00009	Willtek	4303	Communications Test Set	09Jun04	09Jun06

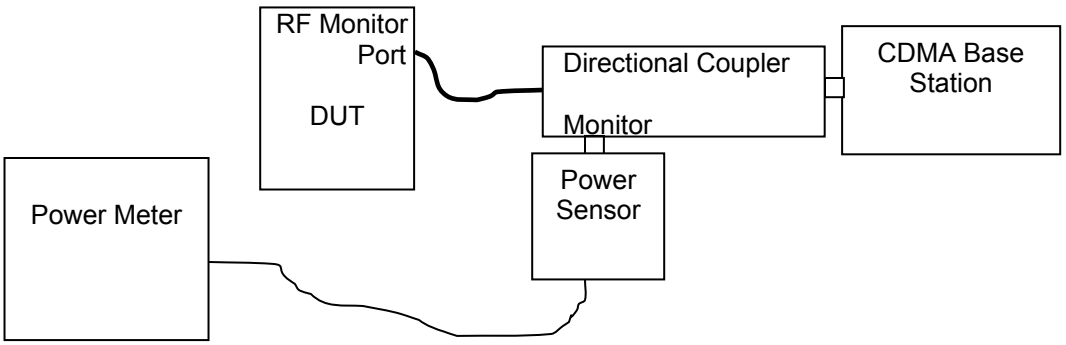
* Attenuation offset in power meter setup

B.5. MEASUREMENT EQUIPMENT SETUP

Measurement Equipment Connections	The equipment was connected as shown in the setup drawing in B.6.
Measurement Equipment Settings	Mode - MAP Offset - set to include loss through cable and directional coupler.
Measurement Procedure	The channel was set on the base station and the resulting power measurement recorded and reported herein.

B.6. SETUP DRAWING

Figure B.6-1 - Setup Drawing



B.7. DUT OPERATING DESCRIPTION

Power measurements were made for each of the three Cellular test channels (Channel 1013, 384 & 777), with the Treo XXX set appropriately as described in section 5.7.

B.8. TEST RESULTS

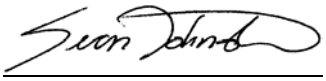
Mode	Channel	Frequency	EBW	Conducted Power	
		MHz	MHz	dBm	Watts
Cellular CDMA	1013	824.700	1.43	+23.8	0.240
	384	836.890	1.43	+24.4	0.275
	777	848.310	1.43	+24.2	0.263

B.9. PASS/FAIL

There is no pass/fail criterion for this measurement. The ERP values, applied to appropriate regulatory requirements are outlined in Appendix E.

B.10. SIGN-OFF

I attest to the accuracy of the data. All measurements reported herein were performed by me and are correct to the best of my knowledge and belief. I assume full responsibility for the completeness of these measurements.



Sean Johnston
Compliance Technologist
Celltech Labs Inc.

14Dec05
Date

Appendix C - Cellular Band Occupied Bandwidth Measurement

C.1. REFERENCES

Normative Reference Standard	FCC CFR 47 §2.202
Procedure Reference	FCC CFR 47 §2.1049

C.2. LIMITS

FCC CFR 47 §2.202	*Applicable Emission designator: 1M25F9W therefore: Theoretical OBW=1.25 MHz*

C.3. ENVIRONMENTAL CONDITIONS

Temperature	25 ± 5 ºC
Humidity	35 ± 5 %RH
Barometric Pressure	uncontrolled

C.4. EQUIPMENT LIST

ASSET NUMBER	MANUFACTURER	MODEL	DESCRIPTION	LAST CAL	CAL DUE
00015	Agilent	E4408B	Spectrum Analyzer	24Jan05	24Jan06
00102	Pasternack	PE7015-3010	30dB attenuator	na	na*
00079	Pasternack	PE2208-6	Directional coupler	na	na*
Customer Supplied	Palm	na	Cable & SMA adapter	na	na*
00009	Willtek	4303	Communications Test Set	09Jun04	09Jun06

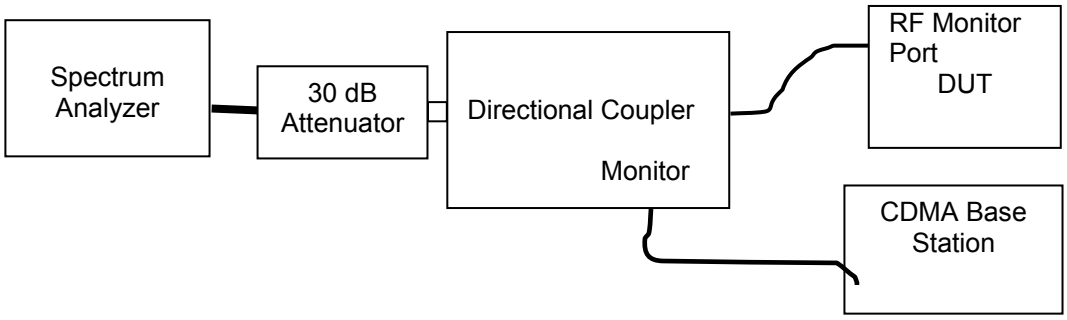
* Verified with power meter prior to use

C.5. MEASUREMENT EQUIPMENT SETUP

MEASUREMENT EQUIPMENT CONNECTIONS	The measurement equipment was connected as shown in C.6.			
MEASUREMENT EQUIPMENT SETTINGS	The spectrum analyzer was set to the following settings:			
	RBW	VBW	Detector	
	kHz	kHz		
	30	30	Sample	

C.6. SETUP DRAWING

Figure C.6-1 - Setup Drawing

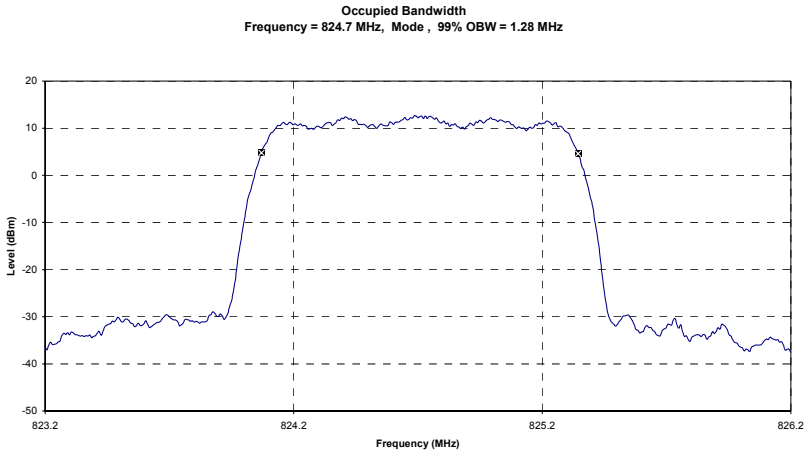


C.7. DUT OPERATING DESCRIPTION

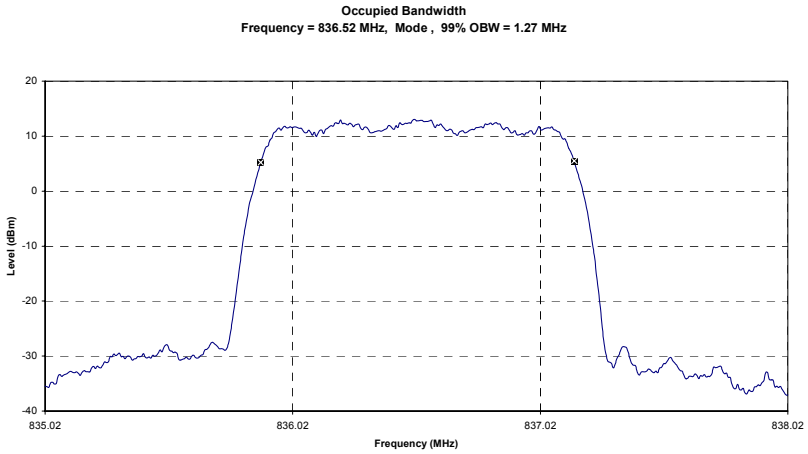
Measurements were made with the DUT transmitting at maximum power in the cellular band, in a configuration as described in Section 5 of this report.

C.8. TEST RESULTS

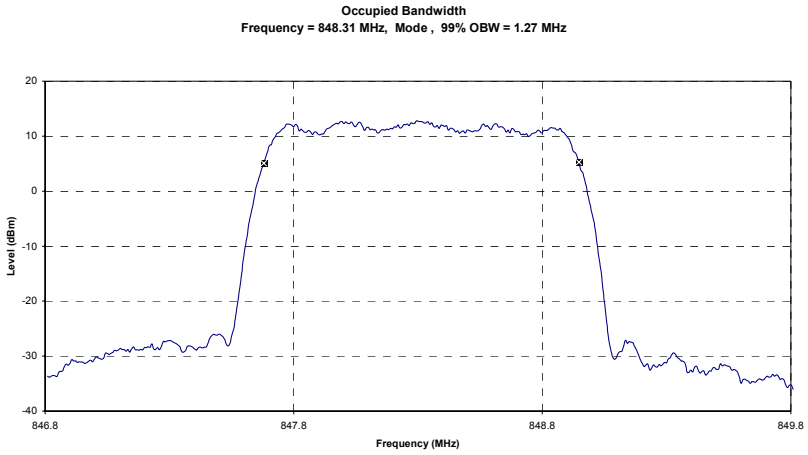
Channel 1013 (824.70 MHz)



Channel 384 (836.52 MHz)



Channel 777 (848.31 MHz)



Summary

Channel	Frequency	OBW
	MHz	MHz
1013	824.70	1.28
384	836.52	1.27
777	848.31	1.27

C.9. PASS/FAIL

In reference to the theoretical bandwidth of 1.25 MHz associated with the published Emission designator 1M25F9W, the maximum occupied bandwidth measured exceeds this by 2.4%

C.10. SIGN-OFF

I attest to the accuracy of the data. All measurements reported herein were performed by me and are correct to the best of my knowledge and belief. I assume full responsibility for the completeness of these measurements.

Duane. M. Friesen
EMC Manager
Celltech Labs Inc.

15Jan06
Date

Appendix D - Cellular Band Conducted TX Spurious Emissions Measurement

D.1. REFERENCES

Normative Reference Standard	FCC CFR 47 §22.917(a)
Procedure Reference	FCC CFR 47 §22.917(b)

D.2. LIMITS

FCC CFR 47 §22.917	*(a) Out of Band Emissions. The mean power of emissions must be attenuated below the mean power of the unmodulated carrier (P) on any frequency twice or more than twice the fundamental frequency by: at least 43 + 10 log P dB*

D.3. ENVIRONMENTAL CONDITIONS

Temperature	25 ± 5 ºC
Humidity	35 ± 5 %RH
Barometric Pressure	uncontrolled

D.4. EQUIPMENT LIST

ASSET NUMBER	MANUFACTURER	MODEL	DESCRIPTION	LAST CAL	CAL DUE
00015	Agilent	E4408B	Spectrum Analyzer	24Jan05	24Jan06
00102	Pasternack	PE7015-3010	30dB attenuator	na	na*
00079	Pasternack	PE2208-6	Directional coupler	na	na*
Customer Supplied	Palm	na	Cable & SMA adapter	na	na*
00009	Willtek	4303	Communications Test Set	09Jun04	09Jun06

* Verified with power meter prior to use

D.5. MEASUREMENT EQUIPMENT SETUP

MEASUREMENT EQUIPMENT CONNECTIONS

The measurement equipment was connected as shown in D.6.

MEASUREMENT EQUIPMENT SETTINGS

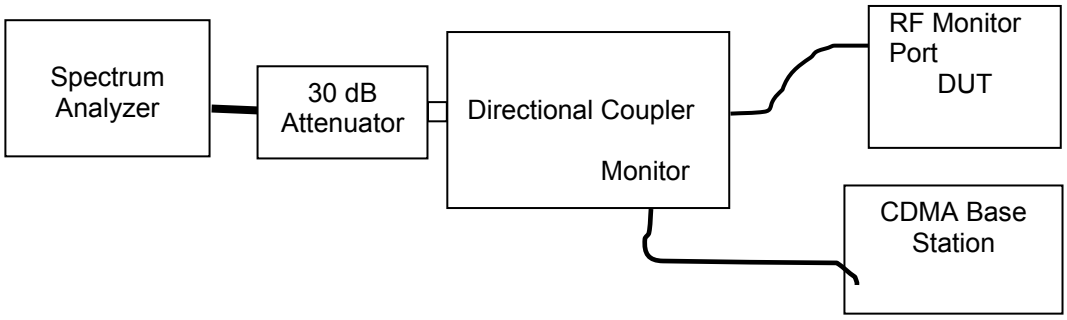
The spectrum analyzer was set to the following settings:

Frequency Range	Measurement		Specified BW*	Detector
	RBW	VBW		
MHz	kHz	kHz	kHz	
At Block edges	10	10	1% EBW	Sample
Within 1 MHz of the Block edges	10	10	1% EBW	Sample
1MHz and 40 MHz from Block edges	10	10	100	Sample
Beyond 40MHz from Block edges	100	100	100	Peak

Measured data corrected for specified BW using 10*log (measurement RBW / specified BW)

D.6. SETUP DRAWING

Figure D.6-1 - Setup Drawing



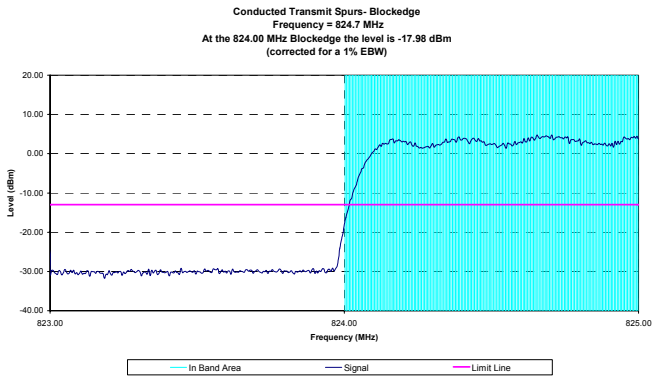
D.7. DUT OPERATING DESCRIPTION

Measurements were made with the DUT transmitting at maximum power in the cellular band, in a configuration as described in Section 5 of this report. The Block Edge measurements were made with the DUT transmitting on the channel closest to the edge under investigation (CH1013 & CH777). The remaining spurious measurements were made on each of the three channels, Low (CH1013), Mid (CH384) and High (CH777).

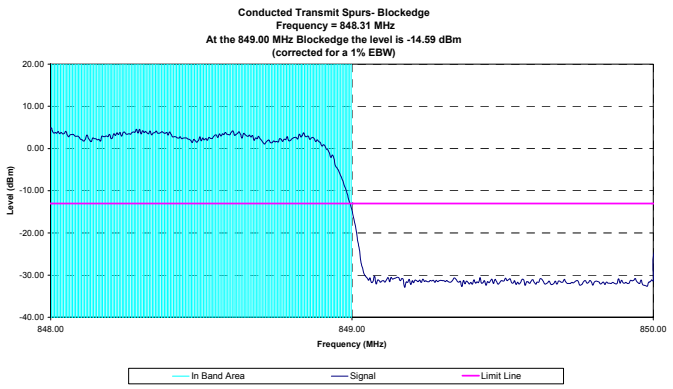
D.8. TEST RESULTS

D.8.1. Spurious Emissions within 1MHz of Block Edge

Lower Block Edge - 824 MHz (Channel 1013)

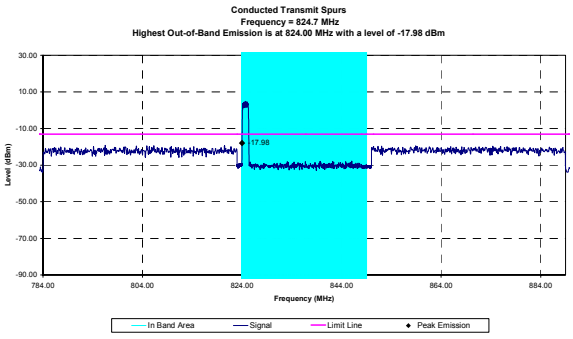


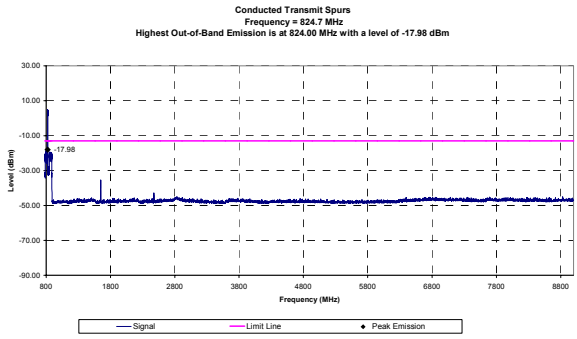
Upper Block Edge - 849 MHz (Channel 777)



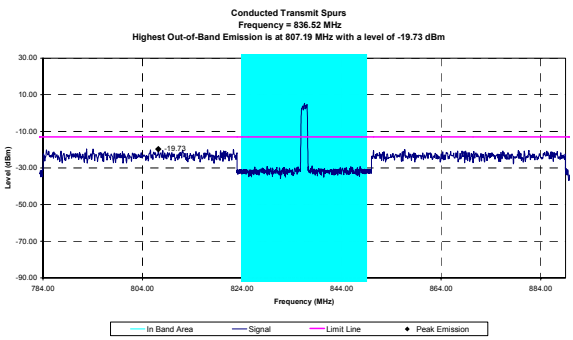
D.8.2. Conducted Transmit Spurious Emissions

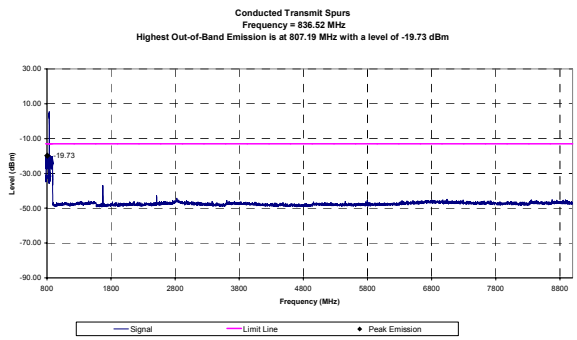
Channel 1013



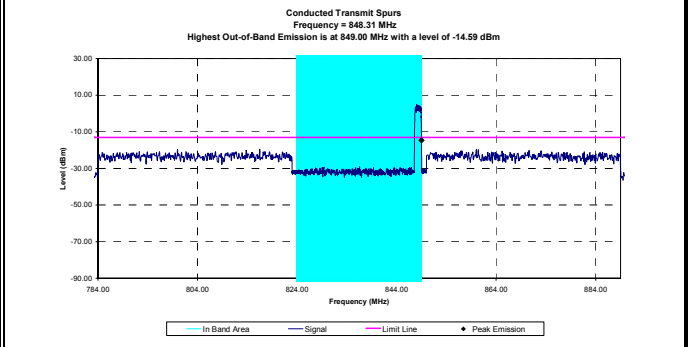


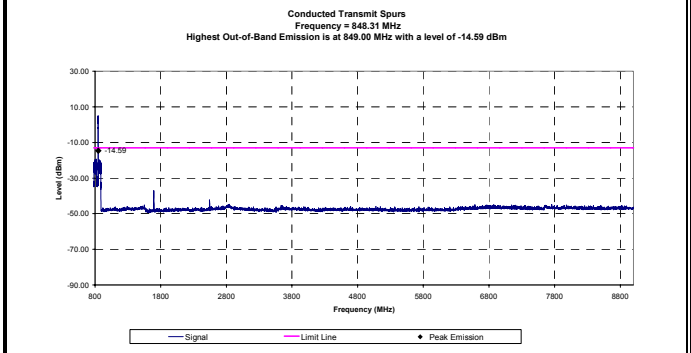
Channel 384





Channel 777





Channel	Peak Spurious Emission				Limit	Margin	Pass / Fail
	Frequency	Measured Level	Total Correction	Level			
	MHz	dBm	dB	dBm	dBm	dB	
1013	824.00	-49.56	31.59	-17.98	-13.00	4.98	Pass
384	807.19	-59.74	40.01	-19.73	-13.00	6.73	Pass
777	849.00	-46.13	31.54	-14.59	-13.00	1.59	Pass

Formulae:
Total Correction (dB) = BW correction (dB) + CL (dB) where: CL includes total loss through cable and directional coupler
BW Correction (dB) = 10 * log (BW_1/BW_2) where: BW_1 is the measurement RBW and BW_2 is the Limit BW*

*Limit BW = 1% of the EBW for in-band +/- 1 MHz, 100 kHz for other

D.9. PASS/FAIL

In reference to the results outlined in D.8, the DUT passes the requirements as stated in the reference standards.

FCC CFR 4 §22.917 (a) Out of band emissions. The power of any emission outside of the authorized operating frequency ranges must be attenuated below the transmitting power (P) by a factor of at least 43 + 10 log(P) dB.

The results set forth in this section meet the requirement with a margin of at least 1.59 dB
(-14.59 dBm @ 849.00 MHz vs a limit of -13 dBm)

D.10. SIGN-OFF

I attest to the accuracy of the data. All measurements reported herein were performed by me and are correct to the best of my knowledge and belief. I assume full responsibility for the completeness of these measurements.

Duane. M. Friesen
EMC Manager
Celltech Labs Inc.

15Jan06
Date

Appendix E - Cellular Band Effective Radiated Power Measurement

E.1. REFERENCES

Normative Reference Standard	FCC CFR 47 §22.913 (a)
Procedure Reference	ANSI/TIA/EIA-603-C

E.2. LIMITS

FCC CFR 47 §22.913 (a)	*(a) Maximum ERP. ……. The ERP of mobile transmitters and auxiliary transmitters must not exceed 7 Watts.*

E.3. ENVIRONMENTAL CONDITIONS

Temperature	uncontrolled
Humidity	uncontrolled
Barometric Pressure	uncontrolled

E.4. EQUIPMENT LIST

RECEIVING EQUIPMENT

ID	ASSET NUMBER	MANUFACTURER	MODEL	DESCRIPTION	LAST CAL	CAL DUE
1	00072	EMCO	2075	Mini-mast	na	na
2	00073	EMCO	2080	Turn Table	na	na
3	00071	EMCO	2090	Multi-Device Controller	na	na
4	00050	Chase	CBL-6111A	Bilog Antenna	08Feb05	08Feb06
5	00051	HP	8566B	Spectrum Analyzer	12Apr05	12Apr06
6	00047	HP	85685A	Preselector	13Apr05	13Apr06
7	00009	Willtek	4303	Communications Test Set	09Jun04	09Jun06
8	00120	Celltech	n/a	Microwave Cable (RX)	25Mar05	25Mar06
9	00121	Andrew	FSJ4-50B	Microwave Cable (RX)	25Mar05	25Mar06
10	00130	Andrew	FSJ1-50A	Microwave Cable (RX)	25Mar05	25Mar06

ADDITIONAL SUBSTITUTION EQUIPMENT

ID	ASSET NUMBER	MANUFACTURER	MODEL	DESCRIPTION	LAST CAL	CAL DUE
11	00059	ETS	3121C	Roberts Dipole	04Dec03	04Dec06
12	00131	Andrew	FSJ1-50A	Microwave Cable (TX)	na	na
13	00127	Andrew	FSJ4-50B	Microwave Cable (TX)	na	na
14	00133	Andrew	FSJ1-50A	Microwave Cable (TX)	na	na
15	00006	R &S	SMR40	Signal Generator	12Apr05	12Apr06
16	00110	Gigatronics	8652A	Power Meter	16Apr05	16Apr06
17	00012	Gigatronics	80701A	Power Sensor	12Sep05	12Sep06
18	00014	Gigatronics	80701A	Power Sensor	7Sep05	07Sep06
19	00102	Pasternack	PE7015-3110	30 dB attenuator	na*	na*
20	00078	Pasternack	PE2214-20	Directional Coupler	na*	na*

*Attenuation offset in power meter setup

E.5. MEASUREMENT EQUIPMENT SETUP

MEASUREMENT EQUIPMENT CONNECTIONS	The measurement equipment was connected as shown in E.6.

MEASUREMENT EQUIPMENT SETTINGS

The spectrum analyzer was set to the following settings:

Frequency Range	RBW	VBW	Detector
MHz	kHz	kHz	
30 - 1000	100	100	Peak

E.6. SETUP DRAWING

Figure E.6-1 - Field Strength Setup Drawing

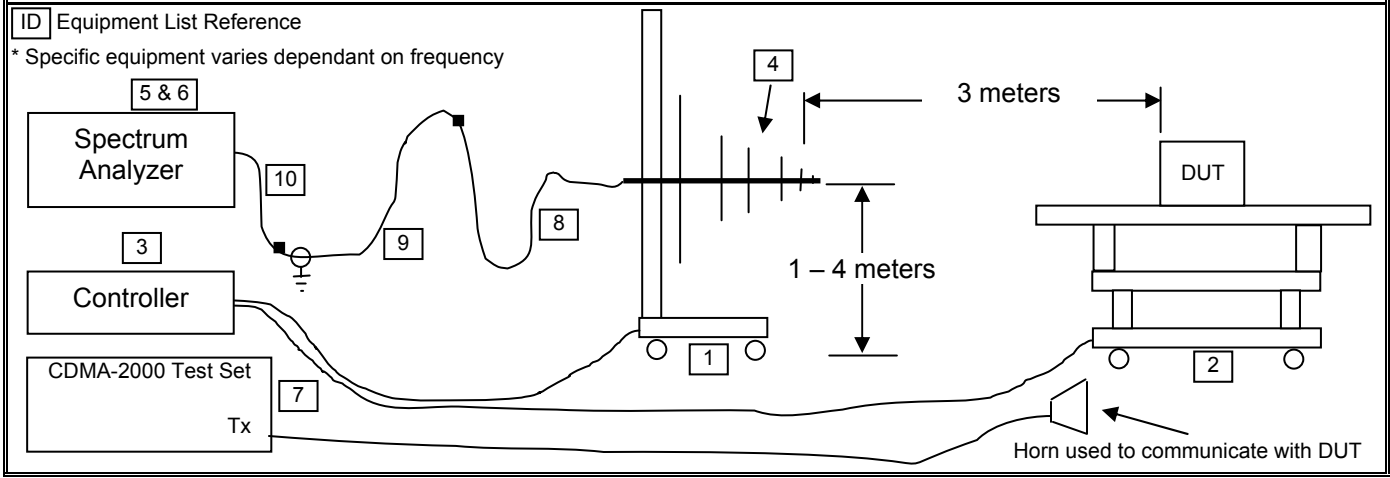
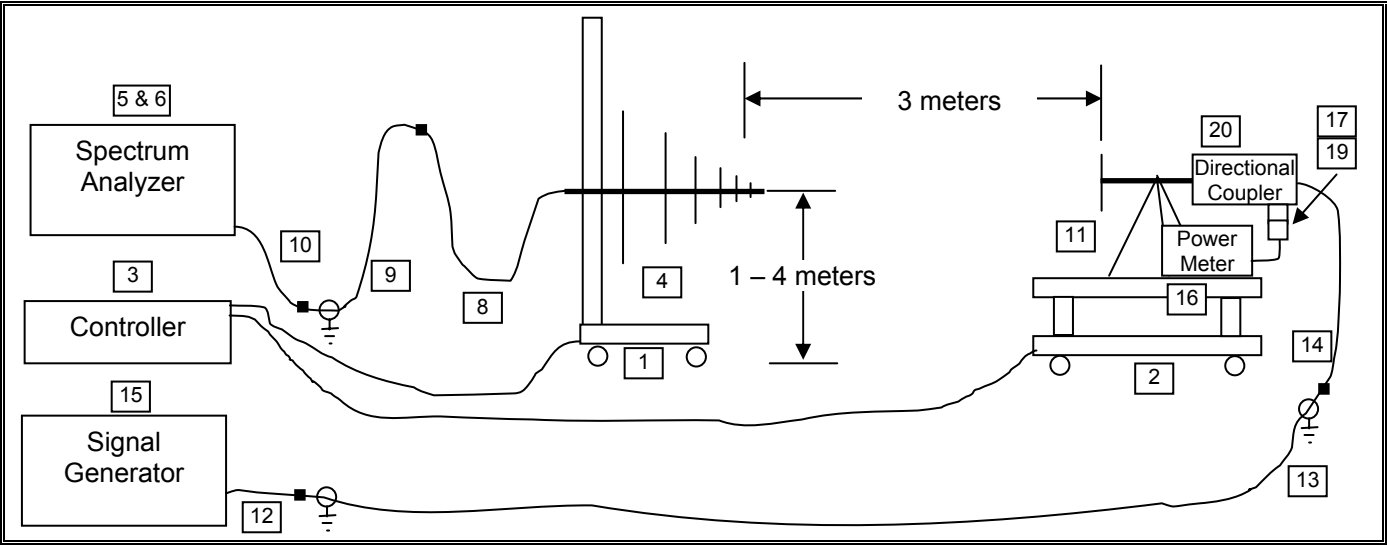


Figure E.6-2 - Signal Substitution Setup Drawing



E.7. SETUP PHOTOGRAPHS

Photograph E.7-1 - 3m ERP Test Setup

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E.8. DUT OPERATING DESCRIPTION

Measurements were made for the low, mid and high CDMA channels transmitting in the cellular band at maximum power levels, and the DUT configured as described in Section 5 of this report.

E.9. ERP TEST RESULTS

Project Number: 705
Company: Palm
Product: Treo XXX

Standard: FCC22.913
Test Start Date: 10-Jan-06
Test End Date: 15-Jan-06

Polarity	Distance	Substitution Antenna Type	Carrier Channel	Frequency	Corrected Field Strength	Substituted SA Signal Level (uncorrected)	Power Applied to Antenna	Antenna Gain	ERP Carrier Level		ERP Limit		Margin	Pass/Fail
	m			MHz	dBuV/m	dBuV	dBm	dBd	dBm	Watts	dBm	Watts	dB	
H	3	B_3121C	1013	824.70	116.79	90.50	15.75	-0.84	14.91	0.031	38.45	7.00	23.54	PASS
V	3	B_3121C	1013	824.70	121.79	95.50	24.85	-0.84	24.01	0.251	38.45	7.00	14.44	PASS
H	3	B_3121C	384	836.52	116.99	90.30	16.64	-0.70	15.94	0.039	38.45	7.00	22.51	PASS
V	3	B_3121C	384	836.52	123.29	96.60	26.17	-0.70	25.47	0.352	38.45	7.00	12.98	PASS
H	3	B_3121C	777	848.31	116.76	89.50	16.50	-0.56	15.94	0.039	38.45	7.00	22.51	PASS
V	3	B_3121C	777	848.31	124.46	97.20	26.23	-0.56	25.67	0.369	38.45	7.00	12.78	PASS

Note:
Dipole Antenna used for substitution

Formulae:
ERP Level (dBm) = Power Applied to Antenna (dBm) + Antenna Gain (dBd)
Margin (dB) = Limit (dBm) – Level (dBm)

E.10. PASS/FAIL

In reference to the results outlined in E.9, the DUT passes the requirements as stated in the reference standards as follows:

FCC 22.913 (a) Maximum ERP. ……. The ERP of mobile transmitters and auxiliary transmitters must not exceed 7 Watts.

A maximum ERP of +25.67 dBm (0.369 Watts) was measured when Channel 777 was transmitting.

E.11. SIGN-OFF

I attest to the accuracy of the data. All measurements reported herein were performed by me and are correct to the best of my knowledge and belief. I assume full responsibility for the completeness of these measurements.

Spencer Watson
Senior Compliance Technologist
Celltech Labs Inc.

15Jan06
Date

Appendix F - Cellular Band Radiated TX Spurious Emissions Measurement

F.1. REFERENCES

Normative Reference Standard	FCC CFR 47 §22.917(e)
Procedure Reference	ANSI/TIA/EIA-603-C

F.2. LIMITS

FCC CFR 47 §22.917	*(e) Out of Band Emissions. The mean power of emissions must be attenuated below the mean power of the unmodulated carrier (P) on any frequency twice or more than twice the fundamental frequency by: at least 43 + 10 log P dB*

F.3. ENVIRONMENTAL CONDITIONS

Temperature	uncontrolled
Humidity	uncontrolled
Barometric Pressure	uncontrolled

F.4. EQUIPMENT LIST

RECEIVING EQUIPMENT

ID	ASSET NUMBER	MANUFACTURER	MODEL	DESCRIPTION	LAST CAL	CAL DUE
1	00072	EMCO	2075	Mini-mast	na	na
2	00073	EMCO	2080	Turn Table	na	na
3	00071	EMCO	2090	Multi-Device Controller	na	na
4	00050	Chase	CBL-6111A	Bilog Antenna	08Feb05	08Feb06
5	00034	ETS	3115	Double Ridged Guide Antenna (Rx)	11Aug05	11Aug06
6	00015	Agilent	E4408B	Spectrum Analyzer	24Jan05	24Jan06
7	00051	HP	8566B	Spectrum Analyzer	12Apr05	12Apr06
8	00047	HP	85685A	Preselector	13Apr05	13Apr06
9	00120	Celltech	n/a	Microwave Cable (RX)	25Mar05	25Mar06
10	00121	Andrew	FSJ4-50B	Microwave Cable (RX)	25Mar05	25Mar06
11	00130	Andrew	FSJ1-50A	Microwave Cable (RX)	25Mar05	25Mar06
12	00115	Miteq	JS4-00102600-35-5A	Low Noise Amplifier	08Jun05	08Jun06
13	00093	Microtronics	HPM50111	High Pass Filter	08Jun05	08Jun06
14	00119	INMAT	18AH-10	10dB attenuator	08Jun05	08Jun06
15	00009	Willtek	4303	Communications Test set	09Jun04	09Jun06

ADDITIONAL SUBSTITUTION EQUIPMENT						
ID	ASSET NUMBER	MANUFACTURER	MODEL	DESCRIPTION	LAST CAL	CAL DUE
16	00059	ETS	3121C	Roberts Dipole	04Dec03	04Dec06
17	00035	ETS	3115	Double Ridged Guide Antenna (Tx)	24Mar04	24Mar06
18	00131	Andrew	FSJ1-50A	Microwave Cable (TX)	na	na
19	00127	Andrew	FSJ4-50B	Microwave Cable (TX)	na	na
20	00133	Andrew	FSJ1-50A	Microwave Cable (TX)	na	na
21	00006	R & S	SMR-20	Signal Generator	12Apr05	12Apr06
22	00110	Gigatronics	8652A	Power Meter	16Apr05	16Apr06
23	00012	Gigatronics	80701A	Power Sensor	12Sep05	12Sep06
24	00014	Gigatronics	80701A	Power Sensor	07Sep05	07Sep06
25	00102	Pasternack	PE7015-3110	30 dB attenuator	na*	na*
26	00078	Pasternack	PE2214-20	Directional Coupler	na*	na*
27	00142	HP	8491A	20 dB attenuator	na*	na*

* Attenuation offset in power meter setup

F.5. MEASUREMENT EQUIPMENT SETUP

MEASUREMENT EQUIPMENT CONNECTIONS

The measurement equipment was connected as shown in F.6. A number of measurement equipment configurations were used to cover the applicable frequency ranges. The configurations for each range are as follows:

Frequency Range	LNA Asset #	Filter/Attenuator Asset #	Rx Antenna Asset #	Tx Antenna Asset #
30 MHz – 1 GHz	none	none	00050	00059
1 GHz – 2 GHz	none	none	00034	00035
2 GHz – 3 GHz	00115	00119	00034	00035
3 GHz – 10 GHz	00115	00093	00034	00035

MEASUREMENT EQUIPMENT SETTINGS

The spectrum analyzer was set to the following settings:

Frequency Range	RBW	VBW	Detector
MHz	kHz	kHz	
800 MHz – 10 GHz	100*	100*	Peak

*Field strength measurements were made with a worse case RBW and VBW of 1 MHz for frequency bands above 1 GHz when adequate margins were attained.

F.6. SETUP DRAWING

Figure F.6-1 - Field Strength Setup Drawing

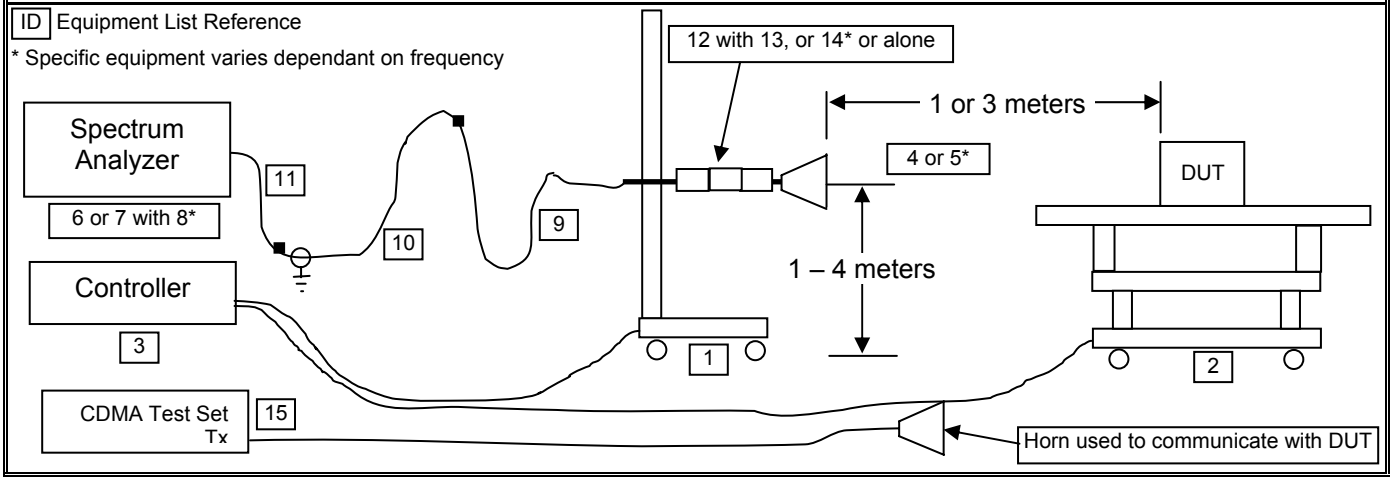
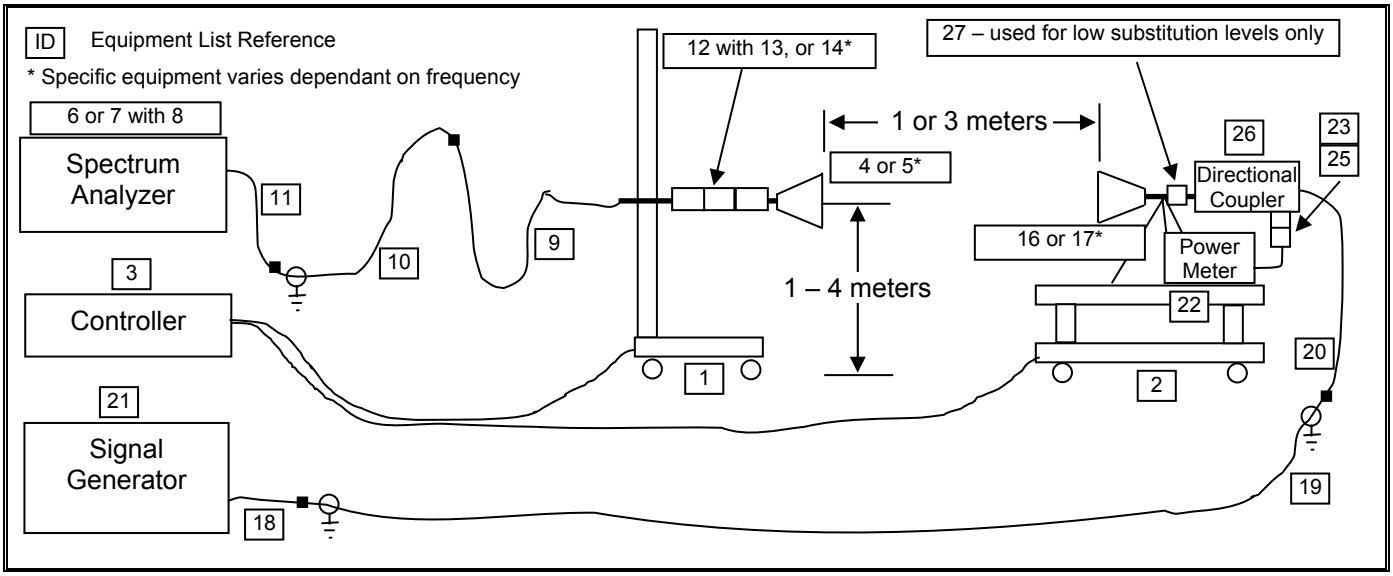


Figure F.6-2 - Signal Substitution Setup Drawing



F.7. SETUP PHOTOGRAPHS

Photograph F.7-1 - 3m Bilog Setup	Photograph F.7-2 - 3m Horn Setup
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Photograph F.7-3 - 1m Horn/LNA Setup

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F.8. DUT OPERATING DESCRIPTION

Measurements were made for the low, mid and high CDMA channels transmitting in the cellular band at maximum power levels as described in Section 5 of this report. The conducted transmit spurious emissions supplementary measurements are described in Appendix D.

F.9. TEST RESULTS

Channel 1013

Project Number:	705	**Standard:**	FCC22.917
Company:	Palm	**Test Start Date:**	10-Jan-06
Product:	Treo XXX	**Test End Date:**	15-Jan-06

Polarity	Distance	Substitution Antenna Type	Carrier Channel	Frequency	Corrected Field Strength	Detector	Substituted SA Signal Level (uncorrected)	Power Applied to Antenna	Antenna Gain	ERP Emission Level	Limit	Margin	Pass/Fail
	m			MHz	dBuV/m		dBuV	dBm	dBd	dBm	dBm or dBuV/m*	dB	
H	3	none	1013	**1649.26**	64.72	PK*					84.4*	**19.7***	PASS*
H	3	none	1013	**2474.01**	46.58	PK*					84.4*	37.8*	PASS*
H	3	none	1013	**3298.44**	44.51	PK*					84.4*	39.9*	PASS*
H	3	none	1013	**4125.00**	42.86	PK*					84.4*	41.5*	PASS*
H	3	none	1013	**4945.72**	44.19	PK*					84.4*	40.2*	PASS*
H	3	none	1013	**5772.83**	45.22	PK*					84.4*	39.2*	PASS*
H	3	none	1013	**6596.03**	53.87	PK*					84.4*	30.5*	PASS*
H	1	none	1013	**7423.67**	49.22	PK*					93.9*	44.7*	PASS*
H	1	none	1013	**8248.18**	51.02	PK*					93.9*	42.9*	PASS*
V	3	none	1013	**1648.58**	63.71	PK*					84.4*	20.7*	PASS*
V	3	none	1013	**2473.42**	47.48	PK*					84.4*	36.9*	PASS*
V	3	none	1013	**3300.32**	44.82	PK*					84.4*	39.6*	PASS*
V	3	none	1013	**4122.01**	43.23	PK*					84.4*	41.1*	PASS*
V	3	none	1013	**4946.17**	44.49	PK*					84.4*	39.9*	PASS*
V	3	none	1013	**5771.85**	45.92	PK*					84.4*	38.4*	PASS*
V	3	none	1013	**6600.12**	53.07	PK*					84.4*	31.3*	PASS*
V	1	none	1013	**7422.67**	49.85	PK*					93.9*	44.1*	PASS*
V	1	none	1013	**8251.13**	50.64	PK*					93.9*	43.3*	PASS*

PK* - measurement made with a peak detector and applied to an average limit.
Pass* - Margin and Pass/Fail based on measured field strengths applied against a theoretical field strength limit.

Note:
The emissions reported above represent the highest emissions or noise floor measured within the frequency band of 30MHz and the 10th harmonic of the carrier with peak field strengths within 20 dB of the theoretical limit. All other emissions attributed to the DUT had field strengths greater than 20 dB below the theoretical limit and substitutions were not made.

Formulae:
ERP Emission Level (dBm) = Power applied to antenna (dBm) + Antenna Gain (dBd)
Margin (dB) = Limit (dBm) – ERP Emission Level (dBm) or Theoretical Limit (dBuV/m) – Corrected Field Strength (dBuV/m)
Theoretical Limit (V/m) = SQRT(30 * P / r2) where P is the total transmitted power (W), r is measurement distance (m)

Channel 384

Project Number:	705	**Standard:**	FCC22.917
Company:	Palm	**Test Start Date:**	10-Jan-06
Product:	Treo XXX	**Test End Date:**	15-Jan-06

Polarity	Distance	Substitution Antenna Type	Carrier Channel	Frequency	Corrected Field Strength	Detector	Substituted SA Signal Level (uncorrected)	Power Applied to Antenna	Antenna Gain	ERP Emission Level	Limit	Margin	Pass/Fail
	m			MHz	dBuV/m		dBuV	dBm	dBd	dBm	dBm or dBuV/m*	dB	
H	3	none	384	817.37	48.72	PK*					84.4*	35.7*	PASS*
H	3	none	384	**1672.47**	57.34	PK*					84.4*	27.0*	PASS*
H	3	none	384	1927.28	48.74	PK*					84.4*	35.6*	PASS*
H	3	none	384	**2511.70**	47.31	PK*					84.4*	37.1*	PASS*
H	3	none	384	**3344.46**	45.46	PK*					84.4*	38.9*	PASS*
H	3	none	384	**4181.80**	42.99	PK*					84.4*	41.4*	PASS*
H	3	none	384	**5016.54**	45.28	PK*					84.4*	39.1*	PASS*
H	3	none	384	**5859.78**	52.07	PK*					84.4*	32.3*	PASS*
H	3	none	384	**6689.43**	53.09	PK*					84.4*	31.3*	PASS*
H	1	none	384	**7530.66**	49.69	PK*					93.9*	44.2*	PASS*
H	1	none	384	**8365.93**	50.02	PK*					93.9*	43.9*	PASS*
V	3	none	384	817.40	52.11	PK*					84.4*	32.3*	PASS*
V	3	none	384	**1672.52**	57.84	PK*					84.4*	26.5*	PASS*
V	3	none	384	**2510.19**	47.31	PK*					84.4*	37.1*	PASS*
V	3	none	384	**3346.21**	45.16	PK*					84.4*	39.2*	PASS*
V	3	none	384	**4180.63**	44.59	PK*					84.4*	39.8*	PASS*
V	3	none	384	**5023.54**	44.52	PK*					84.4*	39.9*	PASS*
V	3	none	384	**5851.56**	51.48	PK*					84.4*	32.9*	PASS*
V	3	none	384	**6689.43**	53.09	PK*					84.4*	31.3*	PASS*
V	1	none	384	**7529.16**	49.36	PK*					93.9*	44.6*	PASS*
V	1	none	384	**8366.50**	50.53	PK*					93.9*	43.4*	PASS*

PK* - measurement made with a peak detector and applied to an average limit.
Pass* - Margin and Pass/Fail based on measured field strengths applied against a theoretical field strength limit.

Note:
The emissions reported above represent the highest emissions or noise floor measured within the frequency band of 30MHz and the 10th harmonic of the carrier with peak field strengths within 20 dB of the theoretical limit. All other emissions attributed to the DUT had field strengths greater than 20 dB below the theoretical limit and substitutions were not made.

Formulae:
ERP Emission Level (dBm) = Power applied to antenna (dBm) + Antenna Gain (dBd)
Margin (dB) = Limit (dBm) – ERP Emission Level (dBm) or Theoretical Limit (dBuV/m) – Corrected Field Strength (dBuV/m)
Theoretical Limit (V/m) = SQRT(30 * P / r2) where P is the total transmitted power (W), r is measurement distance (m)

Channel 777

Project Number:	705	**Standard:**	FCC22.917
Company:	Palm	**Test Start Date:**	10-Jan-06
Product:	Treo XXX	**Test End Date:**	15-Jan-06

Polarity	Distance	Substitution Antenna Type	Carrier Channel	Frequency	Corrected Field Strength	Detector	Substituted SA Signal Level (uncorrected)	Power Applied to Antenna	Antenna Gain	ERP Emission Level	Limit	Margin	Pass/Fail
	m			MHz	dBuV/m		dBuV	dBm	dBd	dBm	dBm or dBuV/m*	dB	
H	3	none	777	**1696.01**	60.61	PK*					84.4*	23.8*	PASS*
H	3	none	777	**2542.41**	47.49	PK*					84.4*	36.9*	PASS*
H	3	none	777	**3392.95**	47.42	PK*					84.4*	37.0*	PASS*
H	3	none	777	**4242.76**	42.70	PK*					84.4*	41.7*	PASS*
H	3	none	777	**5087.17**	44.65	PK*					84.4*	39.7*	PASS*
H	3	none	777	**5937.78**	52.19	PK*					84.4*	32.2*	PASS*
H	3	none	777	**6785.39**	53.18	PK*					84.4*	31.2*	PASS*
H	1	none	777	**7633.97**	49.05	PK*					93.9*	44.9*	PASS*
H	1	none	777	**8479.95**	51.12	PK*					93.9*	42.8*	PASS*
V	3	none	777	829.19	60.19	PK*					84.4*	24.2*	PASS*
V	3	none	777	**1696.43**	59.71	PK*					84.4*	24.7*	PASS*
V	3	none	777	**2545.27**	47.60	PK*					84.4*	36.8*	PASS*
V	3	none	777	**3392.09**	46.42	PK*					84.4*	38.0*	PASS*
V	3	none	777	**4240.59**	44.99	PK*					84.4*	39.4*	PASS*
V	3	none	777	**5094.09**	44.72	PK*					84.4*	39.6*	PASS*
V	3	none	777	**5940.22**	52.50	PK*					84.4*	31.9*	PASS*
V	3	none	777	**6782.17**	52.60	PK*					84.4*	31.8*	PASS*
V	1	none	777	**7637.57**	49.52	PK*					93.9*	44.4*	PASS*
V	1	none	777	**8478.55**	50.59	PK*					93.9*	43.3*	PASS*

PK* - measurement made with a peak detector and applied to an average limit.
Pass* - Margin and Pass/Fail based on measured field strengths applied against a theoretical field strength limit.

Note:
The emissions reported above represent the highest emissions or noise floor measured within the frequency band of 30MHz and the 10th harmonic of the carrier with peak field strengths within 20 dB of the theoretical limit. All other emissions attributed to the DUT had field strengths greater than 20 dB below the theoretical limit and substitutions were not made.

Formulae:
ERP Emission Level (dBm) = Power applied to antenna (dBm) + Antenna Gain (dBd)
Margin (dB) = Limit (dBm) – ERP Emission Level (dBm) or Theoretical Limit (dBuV/m) – Corrected Field Strength (dBuV/m)
Theoretical Limit (V/m) = SQRT(30 * P / r2) where P is the total transmitted power (W), r is measurement distance (m)

F.10. PASS/FAIL

In reference to the results outlined in F.9, the DUT passes the requirements as stated in the reference standards.

(e) Out of Band Emissions. The mean power of emissions must be attenuated below the mean power of the unmodulated carrier (P) on any frequency twice or more than twice the fundamental frequency by: at least 43 + 10 log P dB

The results set forth in this section meet the requirement with a peak to average field strength margin of at least 19.7 dB

F.11. SIGN-OFF

I attest to the accuracy of the data. All measurements reported herein were performed by me and are correct to the best of my knowledge and belief. I assume full responsibility for the completeness of these measurements.

Spencer Watson
Senior Compliance Technologist
Celltech Labs Inc.

15Jan06
Date

Appendix G - PCS Band Conducted TX RF Output Power Measurement

G.1. REFERENCES

Normative Reference Standard	FCC CFR 47 §2.1046
Procedure Reference	FCC CFR 47 §2.1046

G.2. LIMITS

FCC CFR 47 §2.1046 (a)	For transmitters other than single sideband, independent sideband and controlled carrier radiotelephone, power output shall be measured at the RF output terminals when the transmitter is adjusted in accordance with the tune-up procedures to give the values of current and voltage on the circuit elements specified in §2.1033(c) (8).

*EIRP limits are specified in Appendix J.

G.3. ENVIRONMENTAL CONDITIONS

Temperature	25 ± 5 ºC
Humidity	35 ± 5 %RH
Barometric Pressure	uncontrolled

G.4. EQUIPMENT LIST

ASSET NUMBER	MANUFACTURER	MODEL	DESCRIPTION	LAST CAL	CAL DUE
00008	Gigatronics	8652A	Power Meter	29Apr05	29Apr06
00014	Gigatronics	80701A	Power Sensor	07Sep05	07Sep06
00114	AR	DC7154	Directional coupler	na	na*
Customer Supplied	Palm	na	Cable & SMA adapter	na	na*
00009	Willtek	4303	Communications Test Set	09Jun04	09Jun06

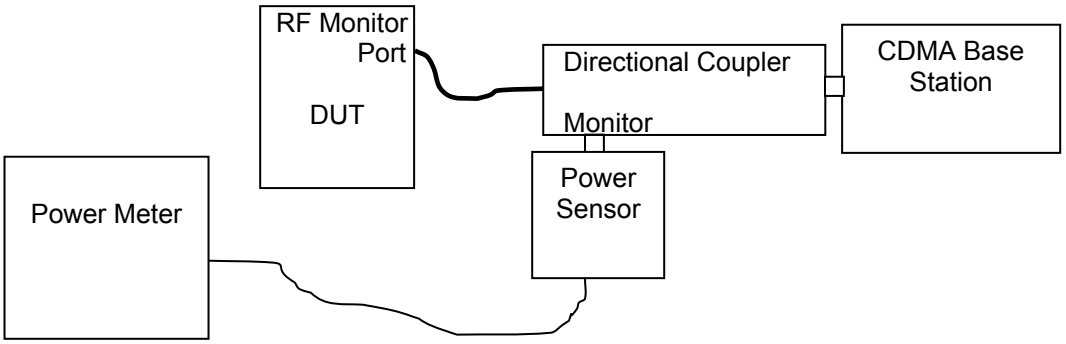
* Attenuation offset in power meter setup

G.5. MEASUREMENT EQUIPMENT SETUP

Measurement Equipment Connections	The equipment was connected as shown in the setup drawing in G.6.
Measurement Equipment Settings	Mode - MAP Offset - set to include loss through cable and directional coupler.
Measurement Procedure	The channel was set on the base station and the resulting power measurement recorded and reported herein.

G.6. SETUP DRAWING

Figure G.6-1 - Setup Drawing



G.7. DUT OPERATING DESCRIPTION

Power measurements were made for each of the three PCS test channels (Channel 25, 600 & 1175), with the Treo XXX phone set appropriately as described in section 5.7.

G.8. TEST RESULTS

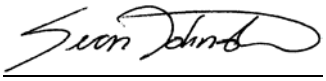
Mode	Channel	Frequency	EBW	Conducted Power	
		MHz	MHz	dBm	watts
PCS CDMA	25	1851.25	1.42	+23.8	0.240
	600	1880.00	1.43	+24.7	0.295
	1175	1909.75	1.42	+24.0	0.251

G.9. PASS/FAIL

There is no pass/fail criterion for this measurement. The EIRP values, applied to appropriate regulatory requirements are outlined in Appendix J.

G.10. SIGN-OFF

I attest to the accuracy of the data. All measurements reported herein were performed by me and are correct to the best of my knowledge and belief. I assume full responsibility for the completeness of these measurements.



Sean Johnston
Compliance Technologist
Celltech Labs Inc.

14Dec05
Date

Appendix H - PCS Band Occupied Bandwidth Measurement

H.1. REFERENCES

Normative Reference Standard	FCC CFR 47 §2.1049
Procedure Reference	FCC CFR 47 §2.1049

H.2. LIMITS

FCC CFR 47 §2.202	*Applicable Emission designator: 1M25F9W therefore: Theoretical OBW=1.25 MHz*

H.3. ENVIRONMENTAL CONDITIONS

Temperature	25 ± 5 ºC
Humidity	35 ± 5 %RH
Barometric Pressure	uncontrolled

H.4. EQUIPMENT LIST

ASSET NUMBER	MANUFACTURER	MODEL	DESCRIPTION	LAST CAL	CAL DUE
00015	Agilent	E4408B	Spectrum Analyzer	24Jan05	24Jan06
00102	Pasternack	PE7015-3010	30dB attenuator	na	na*
00079	Pasternack	PE2208-6	Directional coupler	na	na*
Customer Supplied	Palm	na	Cable & SMA adapter	na	na*
00009	Willtek	4303	Communications Test Set	09Jun04	09Jun06

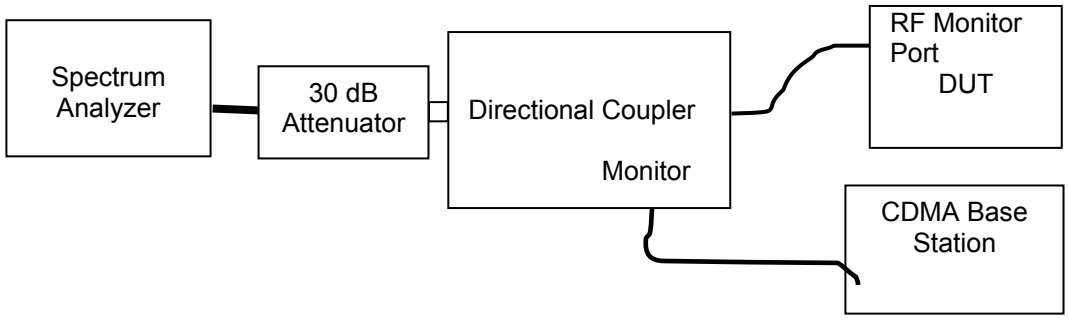
* Verified with power meter prior to use

H.5. MEASUREMENT EQUIPMENT SETUP

MEASUREMENT EQUIPMENT CONNECTIONS	The measurement equipment was connected as shown in H.6.			
MEASUREMENT EQUIPMENT SETTINGS	The spectrum analyzer was set to the following settings:			
	RBW	VBW	Detector	
	kHz	kHz		
	30	30	Sample	

H.6. SETUP DRAWING

Figure H.6-1 - Setup Drawing

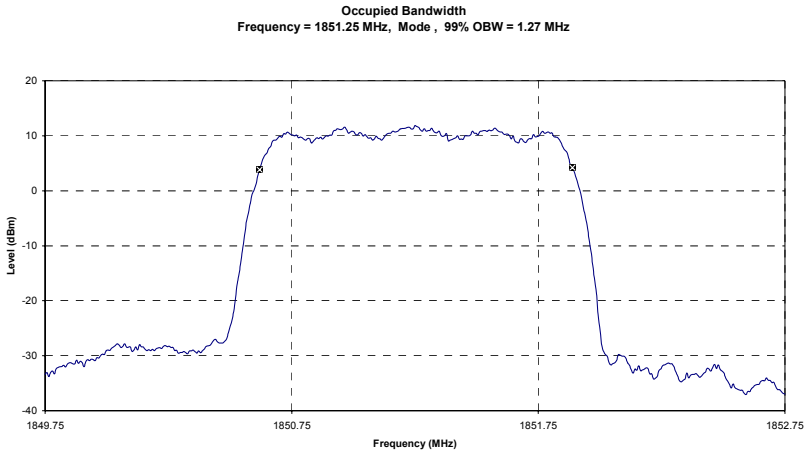


H.7. DUT OPERATING DESCRIPTION

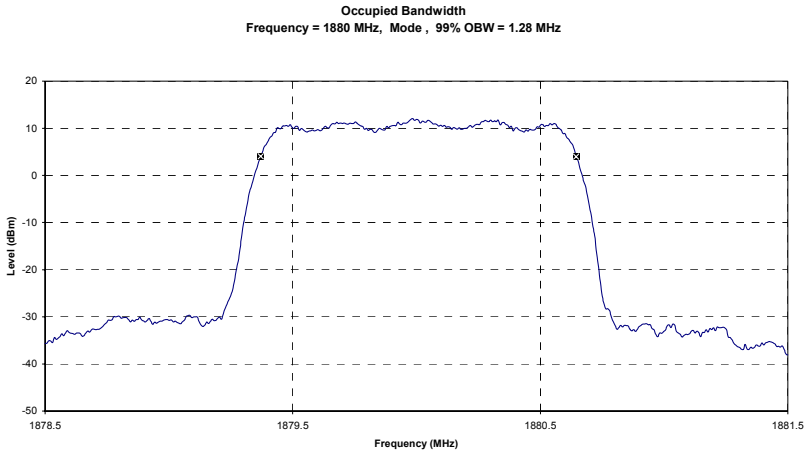
Measurements were made with the DUT transmitting at maximum power in the PCS band, in a configuration as described in Section 5 of this report.

H.8. TEST RESULTS

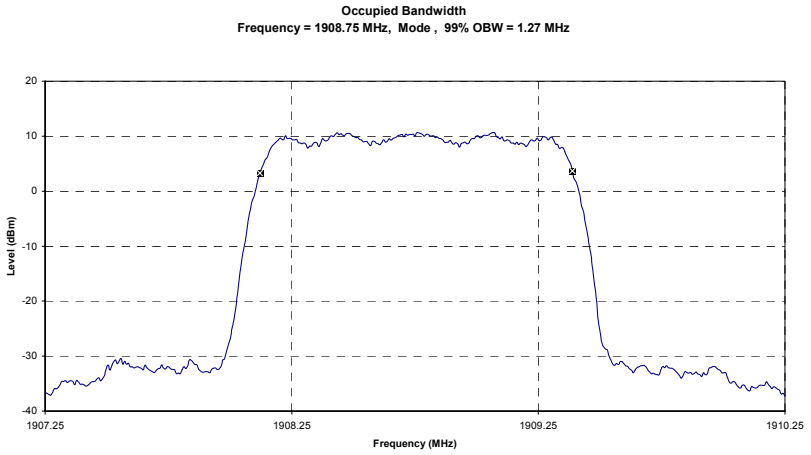
Channel 25 (1851.25 MHz)



Channel 600 (1880 MHz)



Channel 1175 (1908.75 MHz)



Summary

Channel	Frequency	OBW
	MHz	MHz
25	1851.25	1.27
600	1880.00	1.28
1175	1908.75	1.27

H.9. PASS/FAIL

In reference to the theoretical bandwidth of 1.25 MHz associated with the published Emission designator 1M25F9W, the maximum occupied bandwidth measured exceeds this by 2.4%

H.10. SIGN-OFF

I attest to the accuracy of the data. All measurements reported herein were performed by me and are correct to the best of my knowledge and belief. I assume full responsibility for the completeness of these measurements.

Duane. M. Friesen
EMC Manager
Celltech Labs Inc.

15Jan06
Date

Appendix I - PCS Band Conducted TX Spurious Emissions Measurement

I.1. REFERENCES

Normative Reference Standard	FCC CFR 47 §24.238(a)
Procedure Reference	FCC CFR 47 §24.238(b)

I.2. LIMITS

FCC CFR 47 §24.238	(a) *Out of band emissions. The power of any emission outside of the authorized operating frequency ranges must be attenuated below the transmitting power (P) by a factor of at least 43 + 10 log(P) dB.*

I.3. ENVIRONMENTAL CONDITIONS

Temperature	25 ± 5 ºC
Humidity	35 ± 5 %RH
Barometric Pressure	uncontrolled

I.4. EQUIPMENT LIST

ASSET NUMBER	MANUFACTURER	MODEL	DESCRIPTION	LAST CAL	CAL DUE
00015	Agilent	E4408B	Spectrum Analyzer	24Jan05	24Jan06
00102	Pasternack	PE7014-30	30dB attenuator	na	na*
00079	Pasternack	PE2208-6	Directional coupler	na	na*
Customer Supplied	Palm	na	Cable & SMA adapter	na	na*
00009	Willtek	4303	Communications Test Set	09Jun04	09Jun06

* Verified with power meter prior to use

I.5. MEASUREMENT EQUIPMENT SETUP

MEASUREMENT EQUIPMENT CONNECTIONS

The measurement equipment was connected as shown in I.6.

MEASUREMENT EQUIPMENT SETTINGS

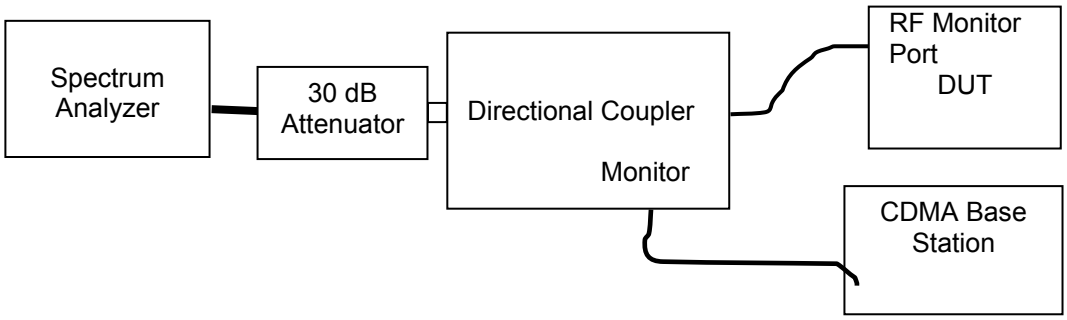
The spectrum analyzer was set to the following settings:

Frequency Range	Measurement		Specified BW*	Detector
	RBW	VBW		
MHz	kHz	kHz	kHz	
At Block edges	10	10	1% EBW	Sample
Within 1 MHz of the Block edges	10	10	1% EBW	Sample
1MHz and 40 MHz from Block edges	10	10	1000	Sample
Beyond 40MHz from Block edges	1000	1000	1000	Peak

Measured data corrected for specified BW using 10 * log (measurement RBW / specified BW)

I.6. SETUP DRAWING

Figure I.6-1 - Setup Drawing



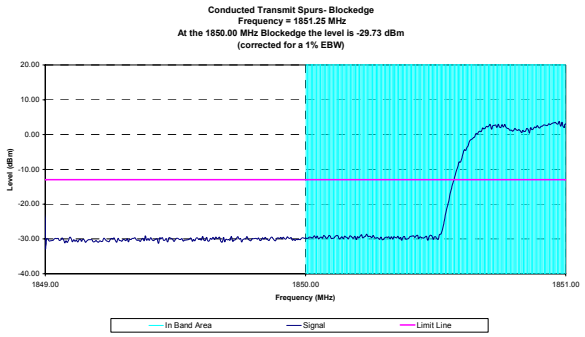
I.7. DUT OPERATING DESCRIPTION

Measurements were made with the DUT transmitting at maximum power in the PCS band, in a configuration as described in Section 5 of this report. The Block edge measurements were made with the DUT transmitting on the channel closest to the edge under investigation (CH25 & CH1175). The remaining spurious measurements were made on each of the three channels, Low (CH25), Mid (CH600) and High (CH1175).

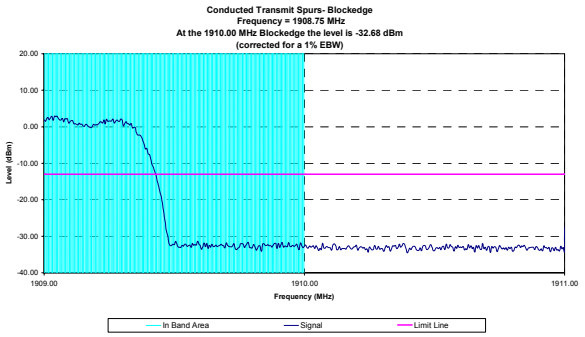
I.8. TEST RESULTS

I.8.1. Spurious Emissions within 1MHz of Block Edge

Lower Block Edge - 1850 MHz

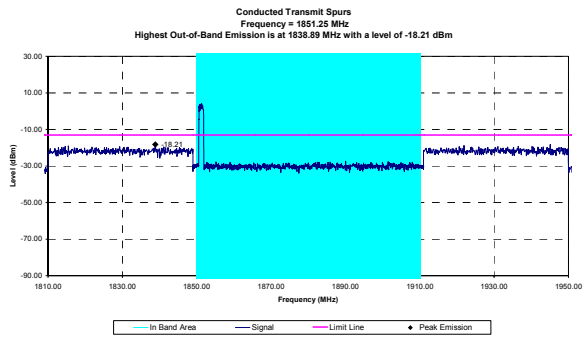


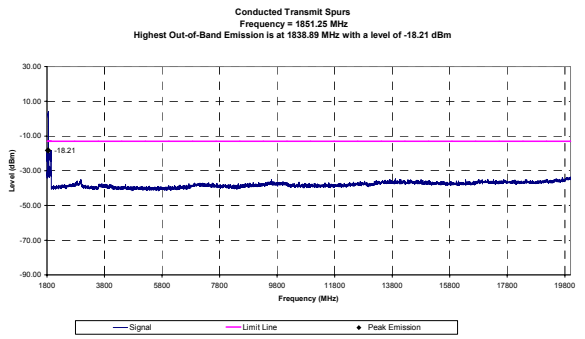
Upper Block Edge - 1910 MHz



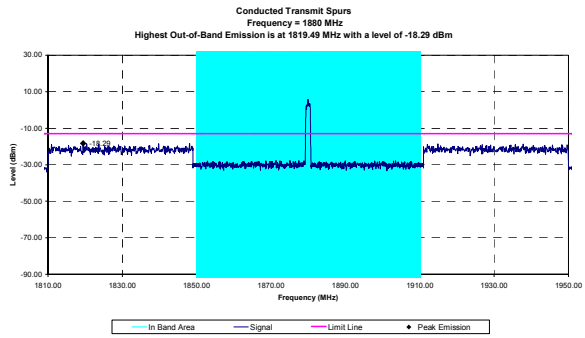
I.8.2. Spurious Emissions removed by more than 1MHz from Block Edge

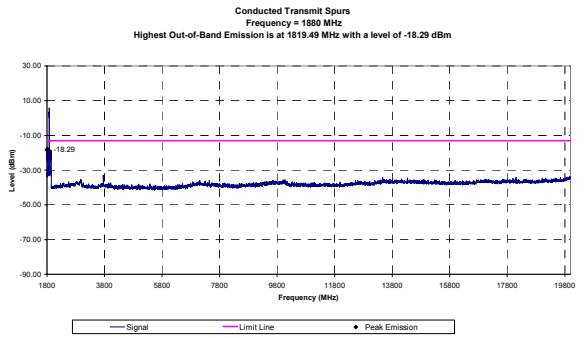
Channel 25



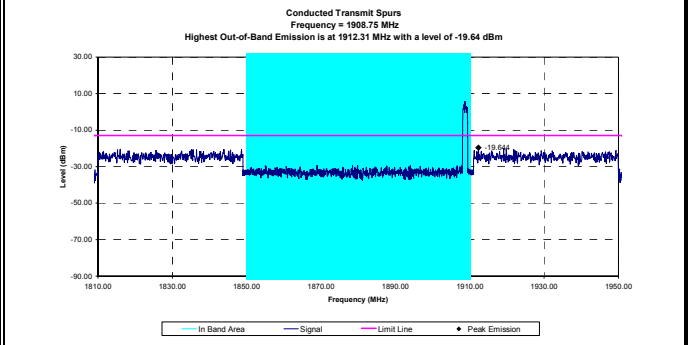


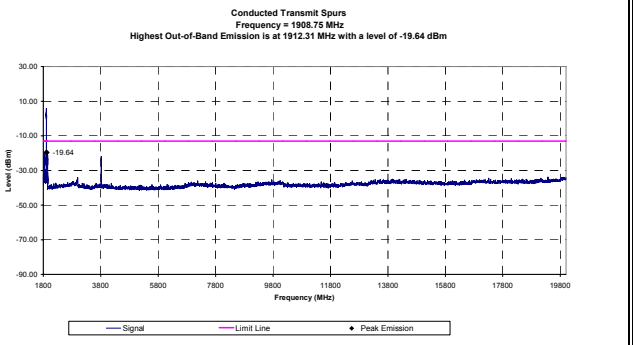
Channel 600





Channel 1175





Channel	Peak Spurious Emission				Limit	Margin	Pass / Fail
	Frequency	Measured Level	Total Correction	Level			
	MHz	dBm	dB	dBm	dBm	dB	
25	1838.89	-58.44	40.23	-18.21	-13.00	5.21	Pass
600	1819.49	-58.51	40.23	-18.29	-13.00	5.29	Pass
1175	1912.31	-59.89	40.25	-19.64	-13.00	6.64	Pass

Formulae:
Total Correction (dB) = BW correction (dB) + CL (dB)
BW Correction (dB) = 10 * log (BW_1/BW_2) where: BW_1 is the measurement RBW and BW_2 is the Limit BW*
*Limit BW = 1% of the EBW for in-band +/- 1 MHz, 1000 kHz for other.

I.9. PASS/FAIL

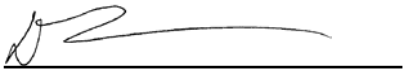
In reference to the results outlined in I.8, the DUT passes the requirements as stated in the reference standards.

FCC CFR 4 §24.238 (a) Out of band emissions. The power of any emission outside of the authorized operating frequency ranges must be attenuated below the transmitting power (P) by a factor of at least 43 + 10 log(P) dB.

The results set forth in this section meet the requirement with a margin of at least 5.21 dB
(-18.21 dBm @ 1838.89 vs a limit of -13 dBm with Channel 25 transmitting)

I.10. SIGN-OFF

I attest to the accuracy of the data. All measurements reported herein were performed by me and are correct to the best of my knowledge and belief. I assume full responsibility for the completeness of these measurements.



Duane M. Friesen
EMC Manager
Celltech Labs Inc.

15Jan06
Date

Appendix J - PCS Band Effective Isotropic Radiated Power Measurement

J.1. REFERENCES

Normative Reference Standard	FCC CFR 47 §24.232(b)
Procedure Reference	ANSI/TIA/EIA-603-C

J.2. LIMITS

FCC CFR 47 §24.232 (b)	*(b) Mobile/portable stations are limited to 2 watts e.i.r.p. peak power and the equipment must employ means to limit the power to the minimum necessary for successful communications.*

J.3. ENVIRONMENTAL CONDITIONS

Temperature	uncontrolled
Humidity	uncontrolled
Barometric Pressure	uncontrolled

J.4. EQUIPMENT LIST

RECEIVING EQUIPMENT

ID	ASSET NUMBER	MANUFACTURER	MODEL	DESCRIPTION	LAST CAL	CAL DUE
1	00072	EMCO	2075	Mini-mast	na	na
2	00073	EMCO	2080	Turn Table	na	na
3	00071	EMCO	2090	Multi-Device Controller	na	na
4	00034	ETS	3115	Double Ridged Guide Antenna (Rx)	11Aug05	11Aug06
5	00051	HP	8566B	Spectrum Analyzer	12Apr05	12Apr06
6	00047	HP	85685A	Preselector	13Apr05	13Apr06
7	00009	Willtek	4303	Communications Test Set	09Jun04	09Jun06
8	00120	Celltech	n/a	Microwave Cable (RX)	25Mar05	25Mar06
9	00121	Andrew	FSJ4-50B	Microwave Cable (RX)	25Mar05	25Mar06
10	00130	Andrew	FSJ1-50A	Microwave Cable (RX)	25Mar05	25Mar06

ADDITIONAL SUBSTITUTION EQUIPMENT

ID	ASSET NUMBER	MANUFACTURER	MODEL	DESCRIPTION	LAST CAL	CAL DUE
11	00035	ETS	3115	Horn Antenna (Tx)	24Mar04	24Mar06
12	00131	Andrew	FSJ1-50A	Microwave Cable (TX)	na	na
13	00127	Andrew	FSJ4-50B	Microwave Cable (TX)	na	na
14	00133	Andrew	FSJ1-50A	Microwave Cable (TX)	na	na
15	00006	R &S	SMR40	Signal Generator	12Apr05	12Apr06
16	00110	Gigatronics	8652A	Power Meter	16Apr05	16Apr06
17	00012	Gigatronics	80701A	Power Sensor	12Sep05	12Sep06
18	00014	Gigatronics	80701A	Power Sensor	7Sep05	07Sep06
19	00102	Pasternack	PE7015-3110	30 dB attenuator	na*	na*
20	00078	Pasternack	PE2214-20	Directional Coupler	na*	na*

*Attenuation offset in power meter setup

J.5. MEASUREMENT EQUIPMENT SETUP

MEASUREMENT EQUIPMENT CONNECTIONS	The measurement equipment was connected as shown in J.6.

MEASUREMENT EQUIPMENT SETTINGS

The spectrum analyzer was set to the following settings:

Frequency Range	RBW	VBW	Detector
MHz	MHz	MHz	
1000 - 2000	1	1	Peak

J.6. SETUP DRAWING

Figure J.6-1 - Field Strength Setup Drawing

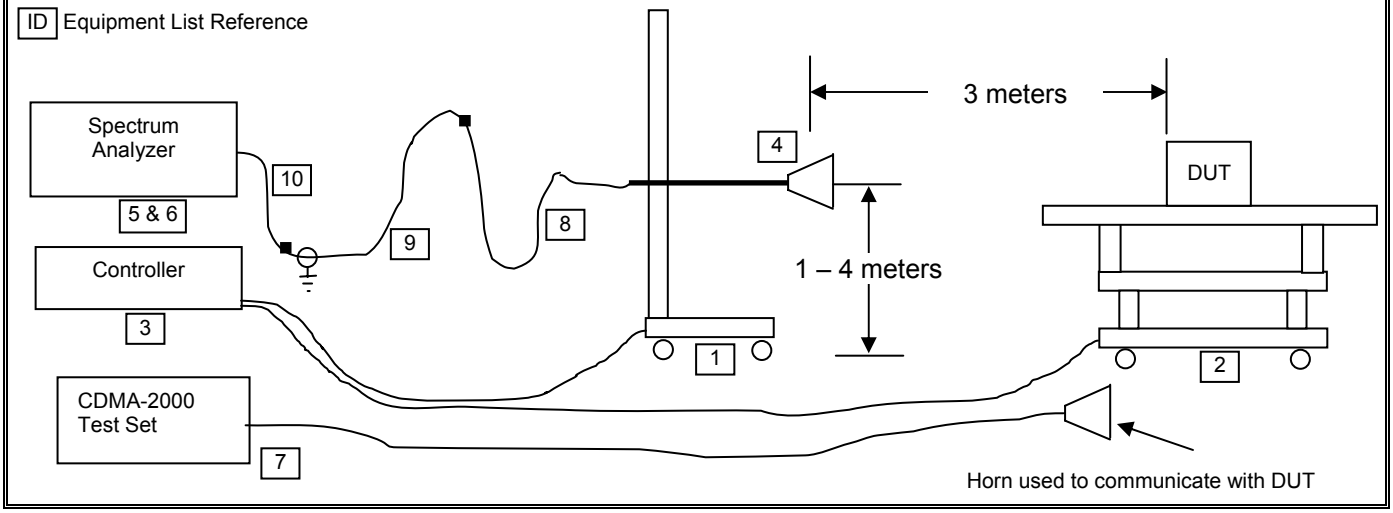
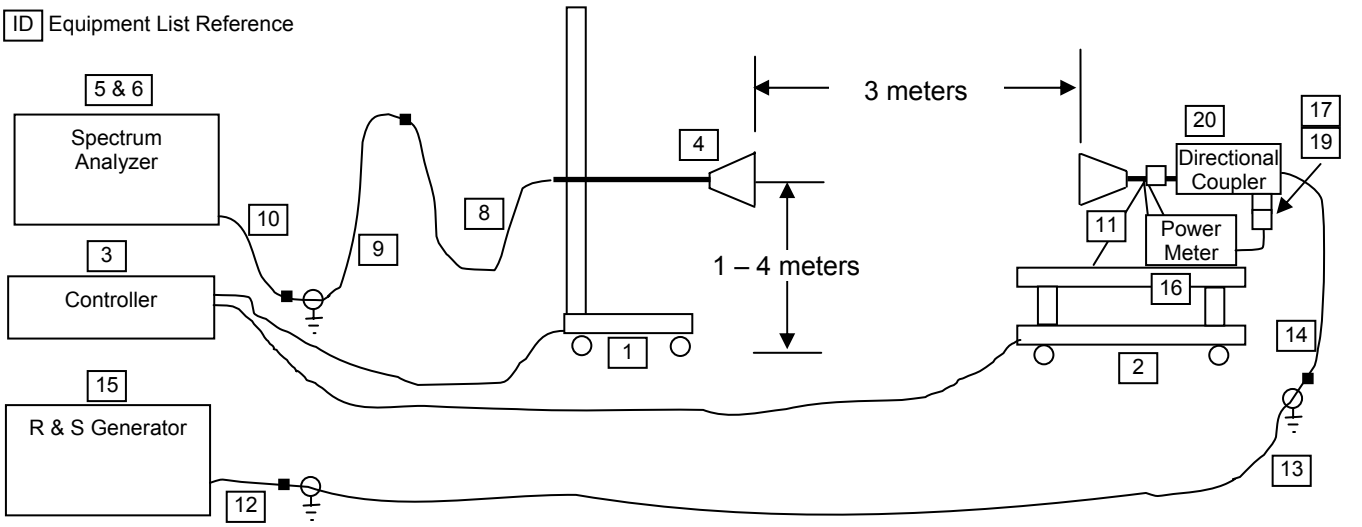


Figure J.6-2 - Substitution Setup Drawing



J.7. SETUP PHOTOGRAPHS

Photograph J.7-1 - 3m EIRP Test Setup

Intentionally Blank

J.8. DUT OPERATING DESCRIPTION

Measurements were made for the low, mid and high CDMA channels transmitting in the PCS band at maximum power levels, and the DUT configured as described in Section 5 of this report.

J.9. EIRP TEST RESULTS

Project Number: 705
Company: Palm
Product: Treo XXX

Standard: FCC24.232b
Test Start Date: 10-Jan-06
Test End Date: 15-Jan-06

Polarity	Distance	Substitution Antenna Type	Carrier Channel	Frequency	Corrected Field Strength	Substituted SA Signal Level (uncorrected)	Power Applied to Antenna	Antenna Gain	EIRP Carrier Level		EIRP Limit		Margin	Pass/Fail
	m			MHz	dBuV/m	dBuV	dBm	dBi	dBm	Watts	dBm	Watts	dB	
H	3	Horn SN6276	25	1851.25	120.51	87.70	14.42	6.67	21.09	0.129	33.01	2.00	11.92	PASS
V	3	Horn SN6276	25	1851.25	122.01	89.20	16.41	6.67	23.08	0.203	33.01	2.00	9.93	PASS
H	3	Horn SN6276	600	1880.00	123.07	90.10	17.38	6.68	24.06	0.254	33.01	2.00	8.95	PASS
V	3	Horn SN6276	600	1880.00	120.97	88.00	15.75	6.68	22.43	0.175	33.01	2.00	10.58	PASS
H	3	Horn SN6276	1175	1908.75	119.23	86.10	14.63	6.68	21.31	0.135	33.01	2.00	11.70	PASS
V	3	Horn SN6276	1175	1908.75	119.33	86.20	14.82	6.68	21.50	0.141	33.01	2.00	11.51	PASS

Note:
Double Ridged Guide Antenna used for substitution

Formulae:
EIRP Level (dBm) = Power Applied to Antenna (dBm) + Antenna Gain (dBi)
Margin (dB) = Limit (dBm) – Level (dBm)

J.10. PASS/FAIL

In reference to the results outlined in J.9, the DUT passes the requirements as stated in the reference standards as follows:

FCC 24.232 (b) Mobile/portable stations are limited to 2 watts e.i.r.p. peak power and the equipment must employ means to limit the power to the minimum necessary for successful communications…..

A maximum EIRP of +24.06 dBm (0.254 Watts) was measured when Channel 600 was transmitting.

J.11. SIGN-OFF

I attest to the accuracy of the data. All measurements reported herein were performed by me and are correct to the best of my knowledge and belief. I assume full responsibility for the completeness of these measurements.

Spencer Watson
Senior Compliance Technologist
Celltech Labs Inc.

15Jan06
Date

Appendix K - PCS Band Radiated TX Spurious Emissions Measurement

K.1. REFERENCES

Normative Reference Standard	FCC CFR 47 §24.238(a)
Procedure Reference	ANSI/TIA/EIA-603-C

K.2. LIMITS

FCC CFR 47 §24.238	(a) *Out of band emissions. The power of any emission outside of the authorized operating frequency ranges must be attenuated below the transmitting power (P) by a factor of at least 43 + 10 log(P) dB.*

K.3. ENVIRONMENTAL CONDITIONS

Temperature	uncontrolled
Humidity	uncontrolled
Barometric Pressure	uncontrolled

K.4. EQUIPMENT LIST

RECEIVING EQUIPMENT

ID	ASSET NUMBER	MANUFACTURER	MODEL	DESCRIPTION	LAST CAL	CAL DUE
1	00072	EMCO	2075	Mini-mast	na	na
2	00073	EMCO	2080	Turn Table	na	na
3	00071	EMCO	2090	Multi-Device Controller	na	na
4	00035	ETS	3115	Double Ridged Guide Antenna (Rx)	24Mar04	24Mar06
5	00161/00166	Waveline	899/801-KF	Standard Gain Horn Antenna (Rx)	n/a	n/a
6	00015	HP	E4408B	Spectrum Analyzer	24Jan05	24Jan06
7	00051	HP	8566B	Spectrum Analyzer	12Apr05	12Apr06
8	00047	HP	85685A	Preselector	13Apr05	13Apr06
9	00120	Celltech	n/a	Microwave Cable (RX)	25Mar05	25Mar06
10	00121	Andrew	FSJ4-50B	Microwave Cable (RX)	25Mar05	25Mar06
11	00130	Andrew	FSJ1-50A	Microwave Cable (RX)	25Mar05	25Mar06
12	00115	Miteq	JS4-00102600-35-5A	Low Noise Amplifier	08Jun05	08Jun06
13	00093	Microtronics	HPM50111	High Pass Filter	08Jun05	08Jun06
14	00119	INMAT	18AH-10	10dB attenuator	08Jun05	08Jun06
15	00009	Willtek	4303	Communications Test Set	09Jun04	09Jun06

ADDITIONAL SUBSTITUTION EQUIPMENT						
ID	ASSET NUMBER	MANUFACTURER	MODEL	DESCRIPTION	LAST CAL	CAL DUE
16	00034	ETS	3115	Horn Antenna (Tx)	24Mar04	24Mar06
17	00162/00165	Waveline	899/801-KF	Standard Gain Horn Antenna (Tx)	na	na
18	00131	Andrew	FSJ1-50A	Microwave Cable (TX)	na	na
19	00127	Andrew	FSJ4-50B	Microwave Cable (TX)	na	na
20	00133	Andrew	FSJ1-50A	Microwave Cable (TX)	na	na
21	00006	R & S	SMR-20	Signal Generator	12Apr05	12Apr06
22	00110	Gigatronics	8652A	Power Meter	16Apr05	16Apr06
23	00012	Gigatronics	80701A	Power Sensor	12Sep05	12Sep06
24	00014	Gigatronics	80701A	Power Sensor	07Sep05	07Sep06
25	00102	Pasternack	PE7015-3110	30 dB attenuator	na*	na*
26	00078	Pasternack	PE2214-20	Directional Coupler	na*	na*
27	00142	HP	8491A	20 dB attenuator	na*	na*

* Attenuation offset in power meter setup

K.5. MEASUREMENT EQUIPMENT SETUP

MEASUREMENT EQUIPMENT CONNECTIONS

The measurement equipment was connected as shown in K.6. A number of measurement equipment configurations were used to cover the applicable frequency ranges. The configurations for each range are as follows:

Frequency Range	LNA Asset #	Filter/Attenuator Asset #	Rx Antenna Asset #	Tx Antenna Asset #
1 GHz – 2 GHz	none	none	00034	00035
2 GHz – 3 GHz	00115	00119	00034	00035
3 GHz – 18 GHz	00115	00093	00034	00035
18 GHz – 25 GHz	00115	none	000161/00166	000162/00165

MEASUREMENT EQUIPMENT SETTINGS

The spectrum analyzer was set to the following settings:

Frequency Range	RBW	VBW	Detector
MHz	kHz	kHz	
1 GHz – 25 GHz	1000	1000	Peak

K.6. SETUP DRAWING

Figure K.6-1 - Field Strength Setup Drawing

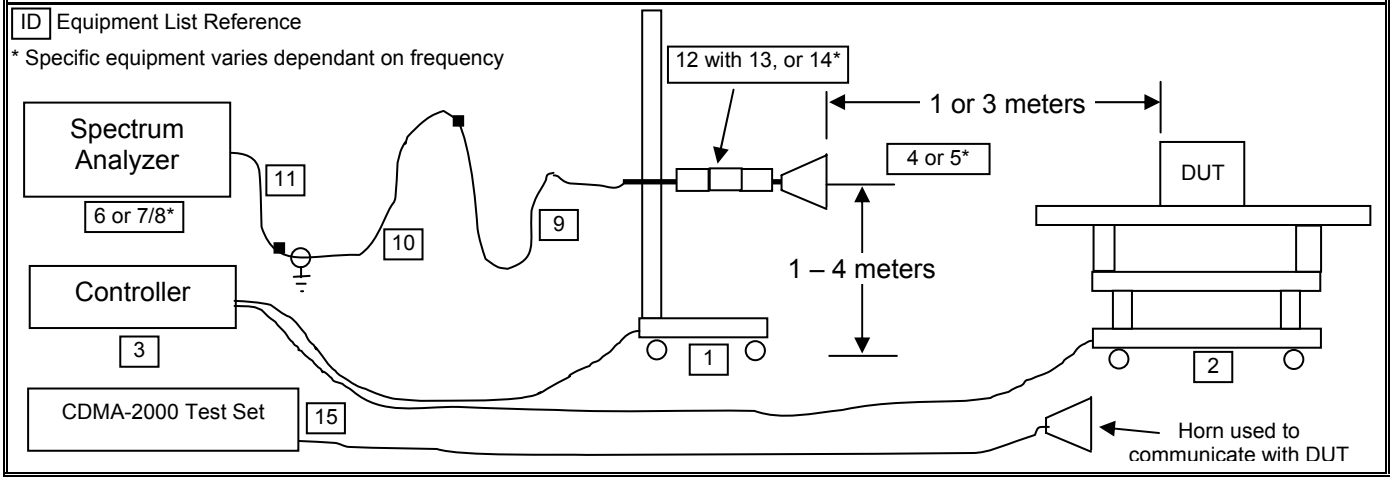
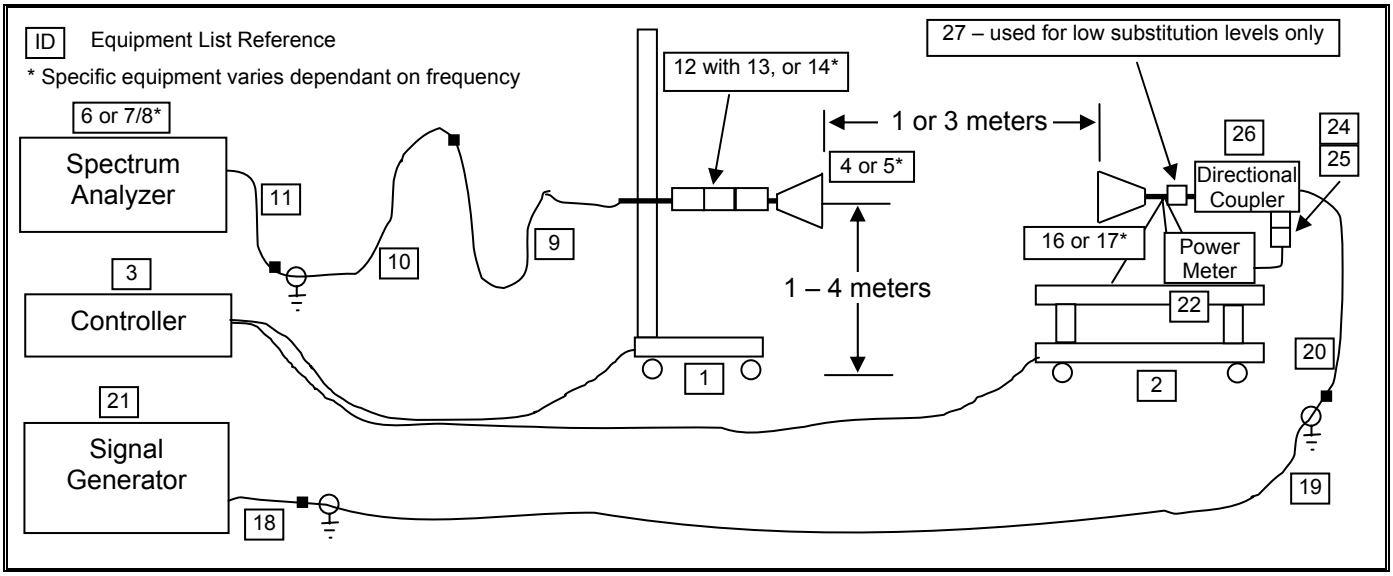


Figure K.6-2 - Signal Substitution Setup Drawing



K.7. SETUP PHOTOGRAPHS

Photograph K.7-1 - 3m Horn Setup	Photograph K.7-2 - 1m Horn/LNA Setup
Intentionally Blank	Intentionally Blank

Photograph K.7-3 - 18-26 GHz 1m Horn/LNA Setup

Intentionally Blank

K.8. DUT OPERATING DESCRIPTION

Measurements were made for the low, mid and high CDMA channels transmitting in the PCS band at maximum power levels as described in Section 5 of this report. The conducted transmit spurious emissions supplementary measurements are described in Appendix I.

K.9. TEST RESULTS

Channel 25

Project Number:	705	**Standard:**	FCC24.238
Company:	Palm	**Test Start Date:**	10-Jan-06
Product:	Treo XXX	**Test End Date:**	15-Jan-06

Polarity	Distance	Substitution Antenna Type	Carrier Channel	Frequency	Corrected Field Strength	Detector	Substituted SA Signal Level (uncorrected)	Power Applied to Antenna	Antenna Gain	EIRP Emission Level	Limit	Margin	Pass/Fail
	m			MHz	dBuV/m		dBuV	dBm	dBi	dBm	dBm or dBuV/m*	dB	
H	3	none	25	1870.41	58.32	PK*					82.2*	23.9*	PASS*
H	3	none	25	1930.76	49.25	PK*					82.2*	33.0*	PASS*
H	3	none	25	**3701.89**	48.10	PK*					82.2*	34.1*	PASS*
H	3	none	25	**5554.64**	42.68	PK*					82.2*	39.5*	PASS*
H	1	none	25	**7403.68**	50.06	PK*					91.8*	41.7*	PASS*
H	1	none	25	**9256.38**	55.07	PK*					91.8*	36.7*	PASS*
H	1	none	25	**11107.10**	53.02	PK*					91.8*	38.8*	PASS*
H	1	none	25	**12957.40**	58.48	PK*					91.8*	33.3*	PASS*
H	1	none	25	**14806.63**	56.88	PK*					91.8*	34.9*	PASS*
H	1	none	25	**16665.20**	55.16	PK*					91.8*	36.6*	PASS*
H	1	none	25	**18514.33**	54.46	PK*					91.8*	37.3*	PASS*
V	3	none	25	1930.74	59.55	PK					82.2*	22.7*	PASS*
V	3	none	25	1930.74	48.15	AV					82.2*	34.1*	PASS*
V	3	none	25	**3701.75**	50.70	PK*					82.2*	31.5*	PASS*
V	3	none	25	**5554.68**	46.58	PK*					82.2*	35.6*	PASS*
V	1	none	25	**7405.98**	50.11	PK*					91.8*	41.7*	PASS*
V	1	none	25	**9257.40**	55.89	PK*					91.8*	35.9*	PASS*
V	1	none	25	**11109.63**	52.74	PK*					91.8*	39.0*	PASS*
V	1	none	25	**12959.93**	58.65	PK*					91.8*	33.1*	PASS*
V	1	none	25	**14807.55**	57.37	PK*					91.8*	34.4*	PASS*
V	1	none	25	**16658.70**	54.93	PK*					91.8*	36.8*	PASS*
V	1	none	25	**18509.18**	54.64	PK*					91.8*	37.1*	PASS*

PK* - measurement made with a peak detector and applied to an average limit.
Pass* - Margin and Pass/Fail based on measured field strengths applied against a theoretical field strength limit.

Note:
The emissions reported above represent the highest emissions or noise floor measured within the frequency band of 30MHz and the 10th harmonic of the carrier with peak field strengths within 20 dB of the theoretical limit. All other emissions attributed to the DUT had field strengths greater than 20 dB below the theoretical limit and substitutions were not made.

Formulae:
EIRP Emission Level (dBm) = Power applied to antenna (dBm) + Antenna Gain (dBi)
Margin (dB) = Limit (dBm) – EIRP Emission Level (dBm) or Theoretical Limit (dBuV/m) – Corrected Field Strength (dBuV/m)
Theoretical Limit (V/m) = SQRT(30 * P / r2) where P is the total transmitted power (W), r is measurement distance (m)

Channel 600

Project Number:	705	**Standard:**	FCC24.238
Company:	Palm	**Test Start Date:**	10-Jan-06
Product:	Treo XXX	**Test End Date:**	15-Jan-06

Polarity	Distance	Substitution Antenna Type	Carrier Channel	Frequency	Corrected Field Strength	Detector	Substituted SA Signal Level (uncorrected)	Power Applied to Antenna	Antenna Gain	EIRP Emission Level	Limit	Margin	Pass/Fail
	m			MHz	dBuV/m		dBuV	dBm	dBi	dBm	dBm or dBuV/m*	dB	
H	3	none	600	155.23	58.52	PK*					82.2*	23.7*	PASS*
H	3	none	600	1110.03	62.29	PK					82.2*	19.9*	PASS*
H	3	none	600	1860.87	57.26	PK*					82.2*	25.0*	PASS*
H	3	none	600	1899.14	58.87	PK*					82.2*	23.4*	PASS*
H	3	none	600	1960.03	50.64	PK*					82.2*	31.6*	PASS*
H	3	none	600	**3759.77**	63.89	PK					82.2*	18.3*	PASS*
H	3	none	600	**3759.77**	53.99	AV					82.2*	28.2*	PASS*
H	3	none	600	**5640.96**	37.94	PK*					82.2*	44.3*	PASS*
H	1	none	600	**7518.18**	49.48	PK*					91.8*	42.3*	PASS*
H	1	none	600	**9401.95**	52.83	PK*					91.8*	38.9*	PASS*
H	1	none	600	**11283.70**	53.05	PK*					91.8*	38.7*	PASS*
H	1	none	600	**13157.43**	58.95	PK*					91.8*	32.8*	PASS*
H	1	none	600	**15040.33**	56.35	PK*					91.8*	35.4*	PASS*
H	1	none	600	**16918.10**	57.47	PK*					91.8*	34.3*	PASS*
H	1	none	600	**18804.23**	54.47	PK*					91.8*	37.3*	PASS*
V	3	none	600	1923.74	49.52	PK*					82.2*	32.7*	PASS*
V	3	none	600	1959.98	59.64	PK					82.2*	22.6*	PASS*
V	3	none	600	1959.98	47.84	AV					82.2*	34.4*	PASS*
V	3	none	600	**3759.82**	66.39	PK					82.2*	15.8*	PASS*
V	3	none	600	**3759.82**	53.79	AV					82.2*	28.4*	PASS*
V	3	none	600	**5640.93**	40.54	PK*					82.2*	41.7*	PASS*
V	1	none	600	**7521.53**	50.03	PK*					91.8*	41.7*	PASS*
V	1	none	600	**9398.18**	55.28	PK*					91.8*	36.5*	PASS*
V	1	none	600	**11281.58**	52.84	PK*					91.8*	38.9*	PASS*
V	1	none	600	**13163.03**	61.11	PK*					91.8*	30.7*	PASS*
V	1	none	600	**15037.90**	56.02	PK*					91.8*	35.7*	PASS*
V	1	none	600	**16920.43**	56.59	PK*					91.8*	35.2*	PASS*
V	1	none	600	**18804.68**	54.14	PK*					91.8*	37.6*	PASS*

PK* - measurement made with a peak detector and applied to an average limit.
Pass* - Margin and Pass/Fail based on measured field strengths applied against a theoretical field strength limit.

Note:
The emissions reported above represent the highest emissions or noise floor measured within the frequency band of 30MHz and the 10th harmonic of the carrier with peak field strengths within 20 dB of the theoretical limit. All other emissions attributed to the DUT had field strengths greater than 20 dB below the theoretical limit and substitutions were not made.

Formulae:
EIRP Emission Level (dBm) = Power applied to antenna (dBm) + Antenna Gain (dBi)
Margin (dB) = Limit (dBm) – EIRP Emission Level (dBm) or Theoretical Limit (dBuV/m) – Corrected Field Strength (dBuV/m)
Theoretical Limit (V/m) = SQRT(30 * P / r2) where P is the total transmitted power (W), r is measurement distance (m)

Channel 1175

Project Number:	705	**Standard:**	FCC24.238
Company:	Palm	**Test Start Date:**	10-Jan-06
Product:	Treo XXX	**Test End Date:**	15-Jan-06

Polarity	Distance	Substitution Antenna Type	Carrier Channel	Frequency	Corrected Field Strength	Detector	Substituted SA Signal Level (uncorrected)	Power Applied to Antenna	Antenna Gain	EIRP Emission Level	Limit	Margin	Pass/Fail
	m			MHz	dBuV/m		dBuV	dBm	dBi	dBm	dBm or dBuV/m*	dB	
H	3	none	1175	1134.71	45.17	PK*					82.2*	37.1*	PASS*
H	3	none	1175	1889.65	60.72	PK					82.2*	21.5*	PASS*
H	3	none	1175	1889.65	51.12	AV					82.2*	31.1*	PASS*
H	3	none	1175	1988.95	48.63	PK*					82.2*	33.6*	PASS*
H	3	none	1175	2411.22	43.39	PK*					82.2*	38.8*	PASS*
H	3	Horn SN6276	1175	**3817.03**	74.50	PK	65.60	-29.00	7.67	-21.33	-13.00	8.33	PASS
H	3	none	1175	**3817.03**	63.50	AV					82.2*	18.7*	PASS*
H	3	none	1175	**5730.01**	45.11	PK*					82.2*	37.1*	PASS*
H	1	none	1175	**7635.75**	49.73	PK*					91.8*	42.0*	PASS*
H	1	none	1175	**9545.38**	55.52	PK*					91.8*	36.3*	PASS*
H	1	none	1175	**11454.05**	53.31	PK*					91.8*	38.5*	PASS*
H	1	none	1175	**13363.93**	56.87	PK*					91.8*	34.9*	PASS*
H	1	none	1175	**15273.70**	54.37	PK*					91.8*	37.4*	PASS*
H	1	none	1175	**17175.75**	57.33	PK*					91.8*	34.4*	PASS*
H	1	none	1175	**19090.88**	54.77	PK*					91.8*	37.0*	PASS*
V	3	none	1175	1116.45	45.23	PK*					82.2*	37.0*	PASS*
V	3	none	1175	1889.66	55.22	PK*					82.2*	27.0*	PASS*
V	3	none	1175	1989.05	55.63	PK*					82.2*	26.6*	PASS*
V	3	none	1175	2423.53	43.62	PK*					82.2*	38.6*	PASS*
V	3	Horn SN6276	1175	**3816.96**	80.50	PK	71.60	-23.21	7.67	-15.54	-13.00	2.54	PASS
V	3	none	1175	**3816.96**	69.20	AV					82.2*	13.0*	PASS*
V	3	none	1175	**5727.13**	42.80	PK*					82.2*	39.4*	PASS*
V	1	none	1175	**7633.13**	49.57	PK*					91.8*	42.2*	PASS*
V	1	none	1175	**9545.50**	55.45	PK*					91.8*	36.3*	PASS*
V	1	none	1175	**11456.25**	53.49	PK*					91.8*	38.3*	PASS*
V	1	none	1175	**13358.43**	61.34	PK*					91.8*	30.4*	PASS*
V	1	none	1175	**15267.43**	55.16	PK*					91.8*	36.6*	PASS*
V	1	none	1175	**17181.40**	57.35	PK*					91.8*	34.4*	PASS*
V	1	none	1175	**19087.43**	54.20	PK*					91.8*	37.6*	PASS*

PK* - measurement made with a peak detector and applied to an average limit.
Pass* - Margin and Pass/Fail based on measured field strengths applied against a theoretical field strength limit.

Note:
The emissions reported above represent the highest emissions or noise floor measured within the frequency band of 30MHz and the 10th harmonic of the carrier with peak field strengths within 20 dB of the theoretical limit. All other emissions attributed to the DUT had field strengths greater than 20 dB below the theoretical limit and substitutions were not made.

Formulae:
EIRP Emission Level (dBm) = Power applied to antenna (dBm) + Antenna Gain (dBi)
Margin (dB) = Limit (dBm) – EIRP Emission Level (dBm) or Theoretical Limit (dBuV/m) – Corrected Field Strength (dBuV/m)
Theoretical Limit (V/m) = SQRT(30 * P / r2) where P is the total transmitted power (W), r is measurement distance (m)

K.10. PASS/FAIL

In reference to the results outlined in K.9, the DUT passes the requirements as stated in the reference standards.

FCC CFR 4 §24.238 (a) Out of band emissions. The power of any emission outside of the authorized operating frequency ranges must be attenuated below the transmitting power (P) by a factor of at least 43 + 10 log(P) dB.

The results set forth in this section meet the requirement with a margin of at least 2.54 dB.

K.11. SIGN-OFF

I attest to the accuracy of the data. All measurements reported herein were performed by me and are correct to the best of my knowledge and belief. I assume full responsibility for the completeness of these measurements.

Spencer Watson
Senior Compliance Technologist
Celltech Labs Inc.

15Jan06
Date

Appendix L - Cellular Band Conducted RX Spurious Emissions Measurement

L.1. REFERENCES

Normative Reference Standard	IC RSS-132 §4.6, RSS-Gen §6 (b)
Procedure Reference	IC RSS-Gen §4.8

L.2. LIMITS

IC RSS-132 §4.6	*Receiver spurious emissions shall comply with the limits specified in RSS-Gen*
RSS-Gen §6 (b)	*(b) If a conducted measurement is made, no spurious output signals appearing at the antenna terminals shall exceed 2 nanowatts per 4 kHz spurious frequency in the band 30 – 1000 MHz or 5 nanowattts above 1 GHz.*

L.3. ENVIRONMENTAL CONDITIONS

Temperature	25 ± 5 ºC
Humidity	35 ± 5 %RH
Barometric Pressure	uncontrolled

L.4. EQUIPMENT LIST

ASSET NUMBER	MANUFACTURER	MODEL	DESCRIPTION	LAST CAL	CAL DUE
00015	Agilent	E4408B	Spectrum Analyzer	24Jan05	24Jan06
00188	Narda	M3933/16-06	2 x 2dB attenuator	na	na*
00078	Pasternack	PE2214-20	Directional coupler	na	na*
Customer Supplied	Palm	na	Cable & SMA adapter	na	na*
00009	Willtek	4303	Communications Test Set	09Jun04	09Jun06

*Verified prior to use

L.5. MEASUREMENT EQUIPMENT SETUP

MEASUREMENT EQUIPMENT CONNECTIONS	The measurement equipment was connected as shown in L.6.

MEASUREMENT EQUIPMENT SETTINGS

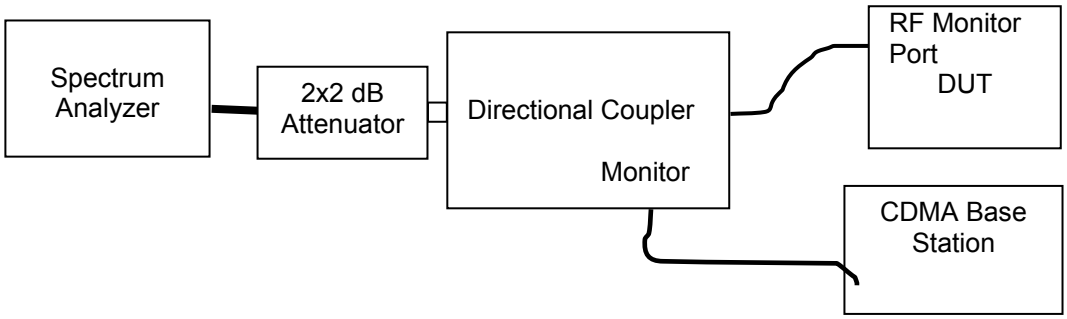
Spectrum analyzer settings:

Frequency Range	RBW	VBW	Bands	Detector
MHz	kHz	kHz		
30 MHz - 3 * F_c	300*	300	25	Peak

Note: Due to measurement limitations, 300 kHz RBW & VBW were used and resulting values corrected to 4 kHz. A bandwidth correction factor of 10 * log (4 kHz / 300 kHz), (-18.75 dB) was be added to the measured results.

L.6. SETUP DRAWING

Figure L.6-1 - Setup Drawing



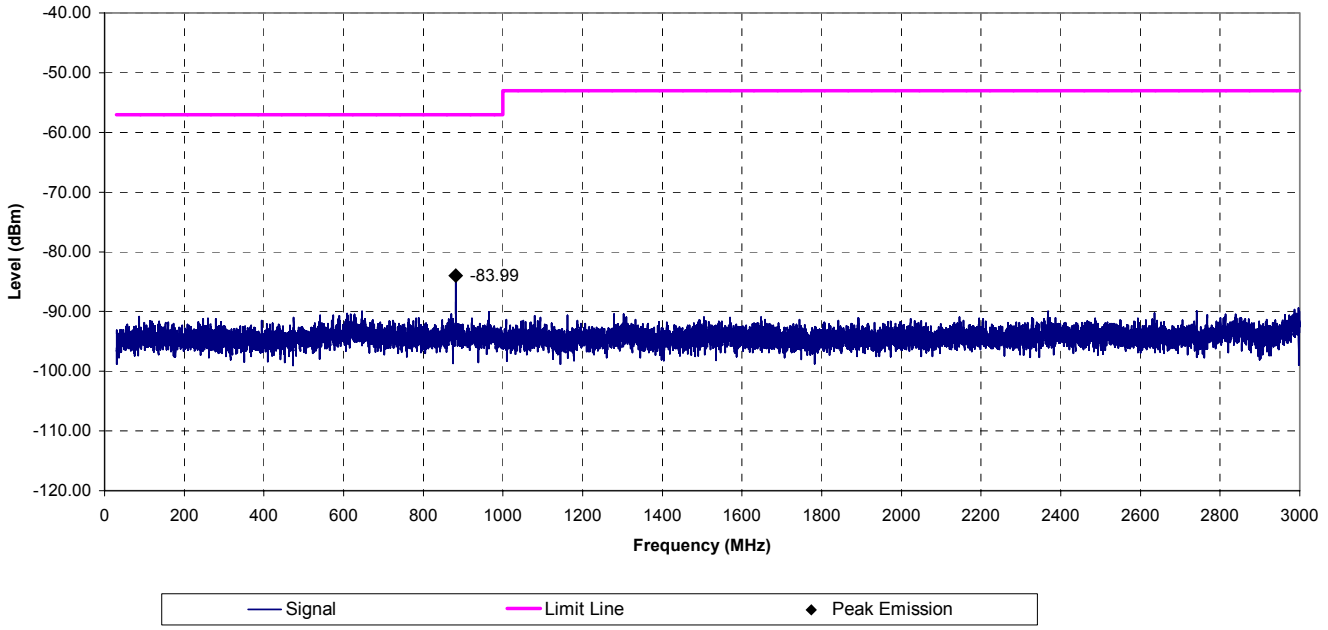
L.7. DUT OPERATING DESCRIPTION

Measurements were made with the DUT in receive mode for the cellular band mid channel (CH384)

L.8. TEST RESULTS

L.8.1. Receiver Spurious Emissions

Cellular Band Mid Channel Conducted Receiver Spurs
Spurious Emission with the lowest margin is at 881.50 MHz
with a margin of 27.00 dB and a level of -83.99dBm
(measured with 300 kHz RBW, corrected to 4 kHz BW)



Calculations:

Limit (dBm) = 10 * log (Limit (mW)
Margin (dB) = Limit (dBm – Peak Emission (dBm)
BW Correction (dB) = 10 * log (4 kHz / 300 kHz) where: 4 kHz is the limit BW and 300 kHz is the measurement RBW

L.9. PASS/FAIL

In reference to the results outlined in L.9, the DUT passes the requirements as stated in the reference standards.

IC RSS-Gen §6 (b) If a conducted measurement is made, no spurious output signals appearing at the antenna terminals shall exceed 2 nanowatts per 4kHz spurious frequency in the band 30 – 1000 MHz or 5 nanowattts above 1 GHz.

The results set forth in this section meet the requirement with a margin of at least 27.0 dB.

L.10. SIGN-OFF

I attest to the accuracy of the data. All measurements reported herein were performed by me and are correct to the best of my knowledge and belief. I assume full responsibility for the completeness of these measurements.

Duane M. Friesen
EMC Manager
Celltech Labs Inc.

18Jan06
Date

Appendix M - PCS Band Conducted RX Spurious Emissions Measurement

M.1. REFERENCES

Normative Reference Standard	IC RSS-133 §6.7 (b)
Procedure Reference	IC RSS-133 §4.5

M.2. LIMITS

IC RSS-133 §6.7	*(b) If a conducted measurement is made, no spurious output signals appearing at the antenna terminals shall exceed 2 nanowatts per 4 kHz spurious frequency in the band 30 – 1000 MHz or 5 nanowattts above 1 GHz.*

M.3. ENVIRONMENTAL CONDITIONS

Temperature	25 ± 5 ºC
Humidity	35 ± 5 %RH
Barometric Pressure	uncontrolled

M.4. EQUIPMENT LIST

ASSET NUMBER	MANUFACTURER	MODEL	DESCRIPTION	LAST CAL	CAL DUE
00015	Agilent	E4408B	Spectrum Analyzer	24Jan05	24Jan06
00188	Narda	M3933/16-06	2 x 2dB attenuator	na	na*
00078	Pasternack	PE2214-20	Directional coupler	na	na*
Customer Supplied	Palm	na	Cable & SMA adapter	na	na*
00009	Willtek	4303	Communications Test Set	09Jun04	09Jun06

*Verified prior to use

M.5. MEASUREMENT EQUIPMENT SETUP

MEASUREMENT EQUIPMENT CONNECTIONS

The measurement equipment was connected as shown in M.6.

MEASUREMENT EQUIPMENT SETTINGS

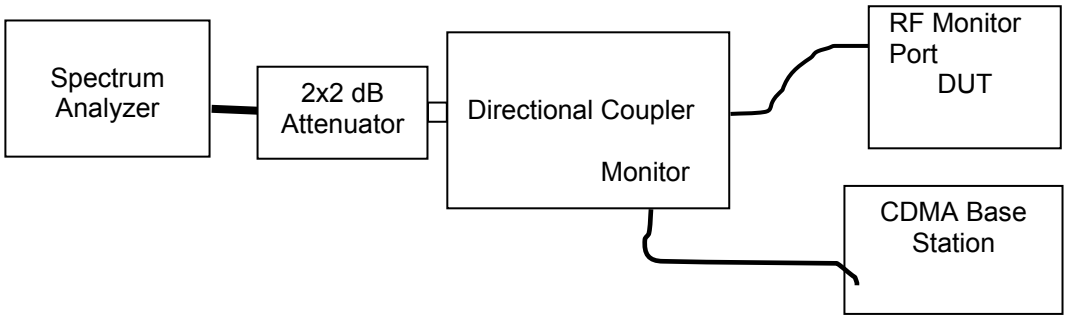
Spectrum analyzer settings:

Frequency Range	RBW	VBW	Bands	Detector
MHz	kHz	kHz		
30 MHz - 3 * F_c	300*	300	50	Peak

Note: Due to measurement limitations, 300 kHz RBW & VBW were used and resulting values corrected to 4 kHz. A bandwidth correction factor of 10 * log (4 kHz / 300 kHz), (-18.75 dB) was be added to the measured results.

M.6. SETUP DRAWING

Figure M.6-1 - Setup Drawing



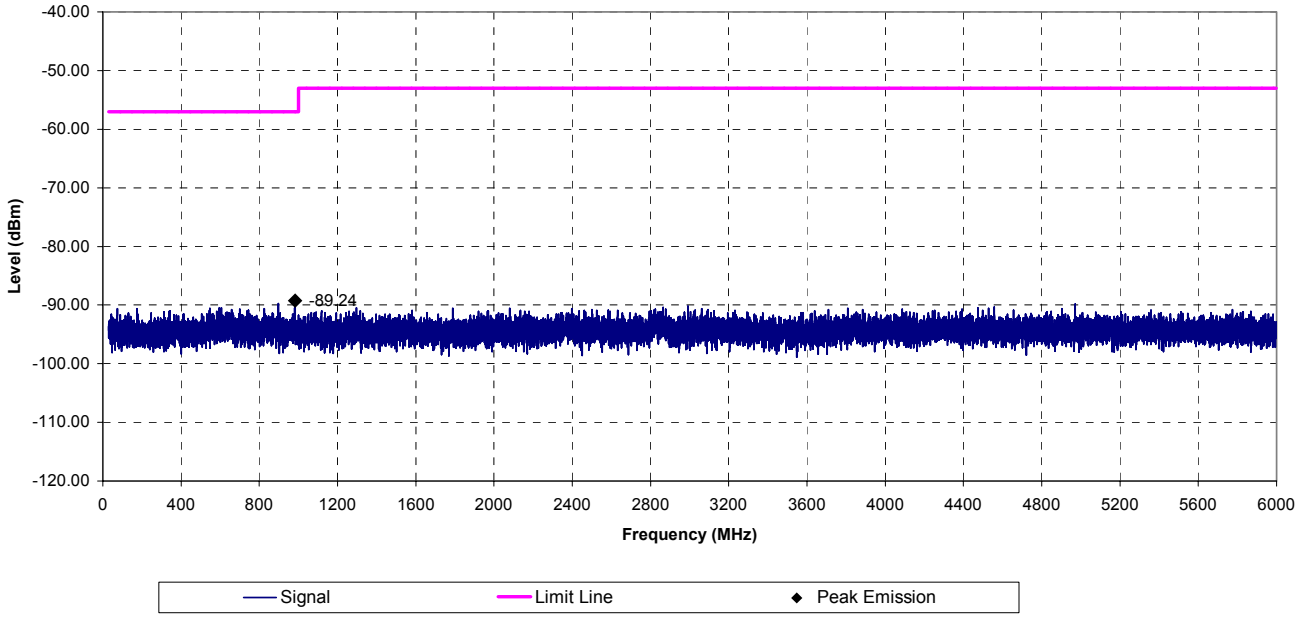
M.7. DUT OPERATING DESCRIPTION

Measurements were made with the DUT in the receive mode for the PCS band mid channel (CH600)

M.8. TEST RESULTS

M.8.1. Receiver Spurious Emissions

PCS Band Mid Channel Conducted Receiver Spurs
Spurious Emission with the lowest margin is at 982.81 MHz
with a margin of 32.25 dB and a level of -89.24dBm
(measured with 300 kHz RBW, corrected to 4 kHz BW)



Calculations:

Limit (dBm) = 10 * log (Limit (mW)
Margin (dB) = Limit (dBm – Peak Emission (dBm)
BW Correction (dB) = 10 * log (4 kHz / 300 kHz) where: 4 kHz is the limit BW and 300 kHz is the measurement RBW

M.9. PASS/FAIL

In reference to the results outlined in M.9, the DUT passes the requirements as stated in the reference standards.

IC RSS-133 §6.7 (b) If a conducted measurement is made, no spurious output signals appearing at the antenna terminals shall exceed 2 nanowatts per 4kHz spurious frequency in the band 30 – 1000 MHz or 5 nanowattts above 1 GHz.

The results set forth in this section meet the requirement with a margin of at least 32.25 dB.

M.10. SIGN-OFF

I attest to the accuracy of the data. All measurements reported herein were performed by me and are correct to the best of my knowledge and belief. I assume full responsibility for the completeness of these measurements.

Duane M. Friesen
EMC Manager
Celltech Labs Inc.

18Jan06
Date

END OF DOCUMENT