

Applicant: Palm Inc.

FCC ID: O3WI70500

## **EXHIBIT VI. Test Report**

FCC ID: O3WI70500

Palm Held Data Terminal

Certification under Part 90

Prepared On Behalf Of

Palm Inc.  
5470 Great American Parkway  
Santa Clara, CA 95052

Prepared

By

Spectrum Technology, Inc.  
209 Dayton Street, Suite 205  
Edmonds, WA 98020  
425 771-4482

July 5, 2001

Exhibit VI

**CERTIFICATION****TABLE OF CONTENTS**

Exhibit 6A - RF Power Output (2.1046)	1
Exhibit 6E - Occupied Bandwidth (2.1049)	2
Low Power - Plot A 50 kHz span, Plot B 100 kHz span	3 - 4
High Power - Plot A 50 kHz span, Plot B 100 kHz span	5 - 6
Exhibit 6F - Spurious Emissions at Antenna Terminals (2.1051)	7
Low Power - 3 Plots different spans and RBW/VBW	8 - 10
High Power - 3 Plots different spans and RBW/VBW	11 - 13
Exhibit 6G - Transmitter ERP and Radiated Spurious Emissions (2.1053)	14
Exhibit 6H - Frequency Stability (2.1055)	15 - 16

Applicant: Palm Inc.

FCC ID: O3WI70500

## **EXHIBIT 6A TEST: RF POWER OUTPUT**

FCC ID: O3WI70500

Grantee: **Palm, Inc.**

Serial No.: 60JU15110105

Minimum Standard Specified: Para. 90.635 (d)

Test Results: Equipment is Compliant with Standard

Equipment Authorization  
Procedure: Para. 2.1046

The i705 radio transmitter was modulated at its maximum amplitude and symbol rate under which the equipment will be operated during the RF power output measurement.

## MEASUREMENT DATA

GIGA-TRONICS 8541B Universal Power Meter

Serial number: 1830880

The test equipment connected to the EUT has a 50 ohm impedance. A connector was soldered in place of the built in antenna to facilitate taking this measurement. This connector was directly connected to the power meter and the readings reported below measured.

	<u>Low Power</u>	<u>High Power</u>
Measured Transmitter Output Power:	24.02 dBm	33.09 dBm
Manufacturer's Rated Power	24 dBm (.25 Watt)	33 dBm (2 watt)
Center Frequency:	898.00 MHz	898.00MHz

Applicant: Palm Inc.

FCC ID: O3WI70500

**EXHIBIT 6E            TEST: OCCUPIED BANDWIDTH**

FCC ID: O3WI70500

Grantee: Palm, Inc.

Serial No.: 60JU15110105

Minimum Standard Specified: Para. 90.210 (j)

Test Results: Equipment is Compliant with Standard

Equipment Authorization Procedure: Para. 2.1049

The i705 radio is designed for 8 kbps 0.3 BT direct digital GMSK Modulation in a packet data protocol on the Cingular Mobile Data Network. The transmitter was modulated at its maximum amplitude and symbol rate under which the equipment will be operated.

A connector was soldered in place of the built in antenna to facilitate taking this measurement. The spectrum analyzer used, an Hewlett Packard 8562A, was directly connected to the EUT with a short length of coax and the following plots were taken of the occupied bandwidth.

**MEASUREMENT DATA**

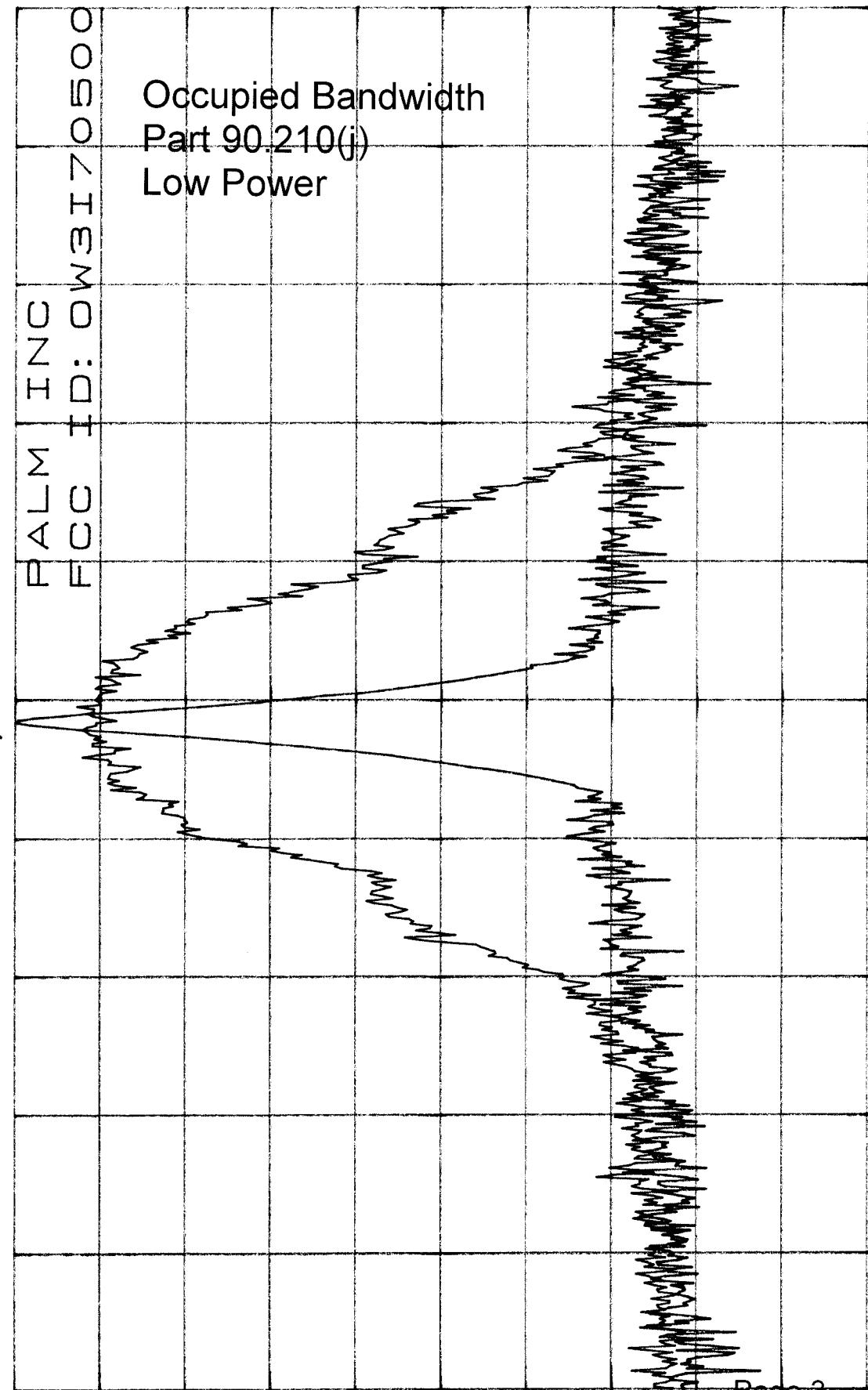
Four plots of the Occupied Bandwidth were made, two low power and two high power. Plot A at 50 kHz and Plot B at 100 kHz Span. Trace A Modulated Pseudo Random GMSK Data, Trace B Carrier Only.

		Plot A	Plot B	
Scan Width:		50	100	kHz
Settings:	RBW:	300	300	kHz
	VBW:	100	300	kHz
Scan Time: (multiple sweeps)		5.0	3.0	sec.
Center Frequency:		898.000	898.000	MHz

\*ATTEN 30dB

RL 14.3dBm

10dB/



CENTER 898.0000MHz  
\*RBW 300Hz \*VBW 100Hz  
SPAN 50.00KHz SWP 5.0sec

\*ATTEN 30dB  
RL 14.3dBm

10dB/

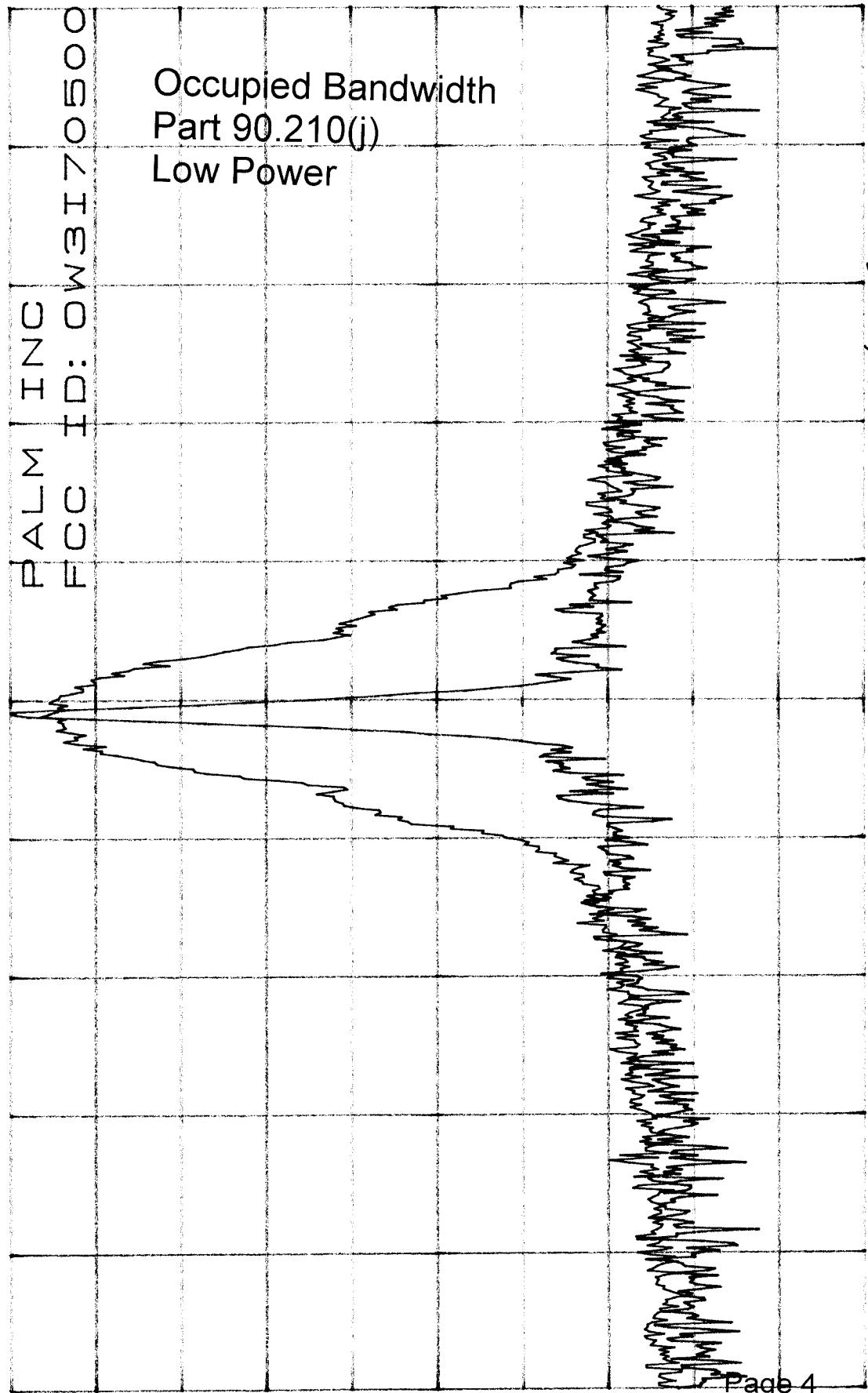
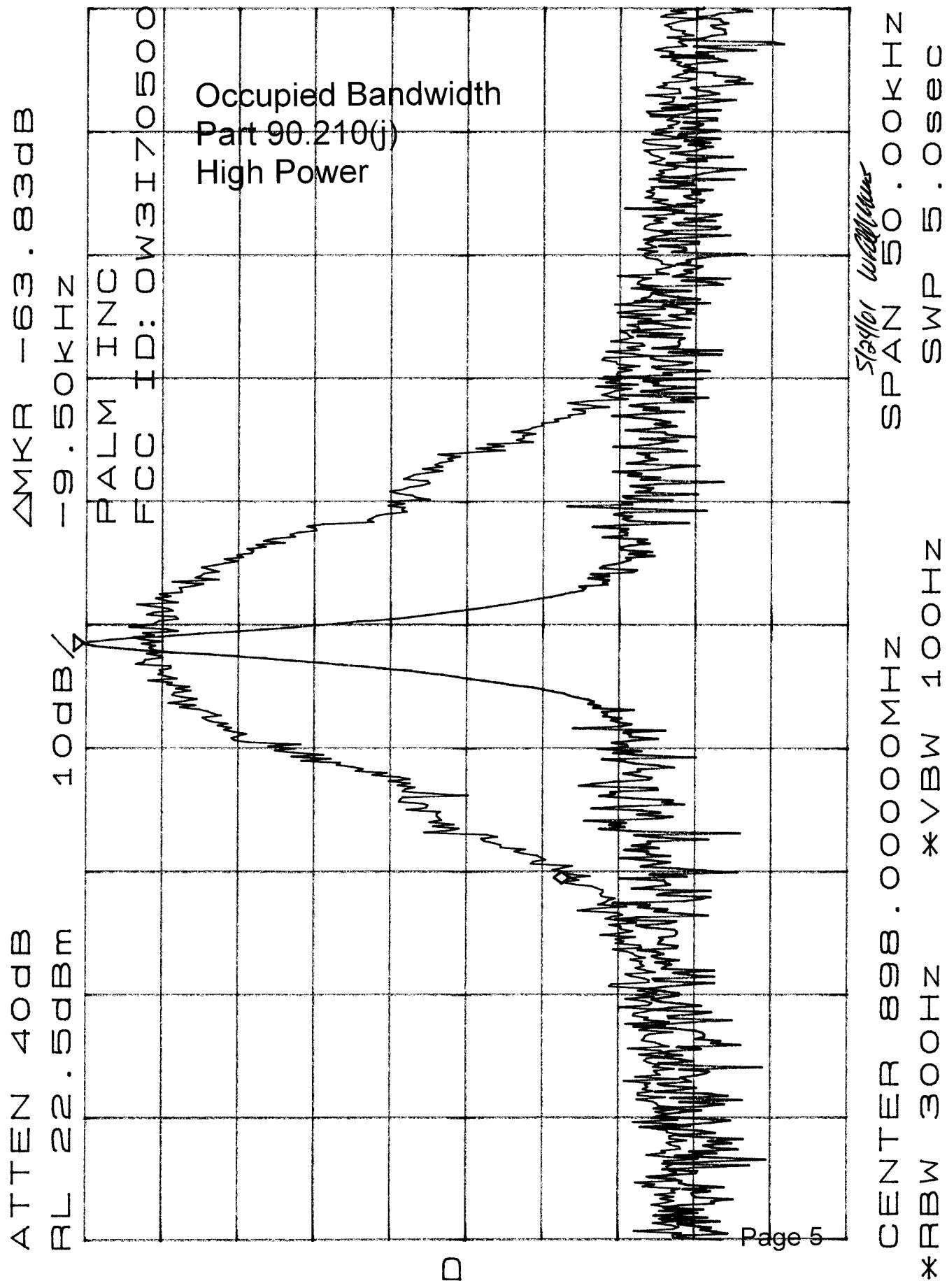
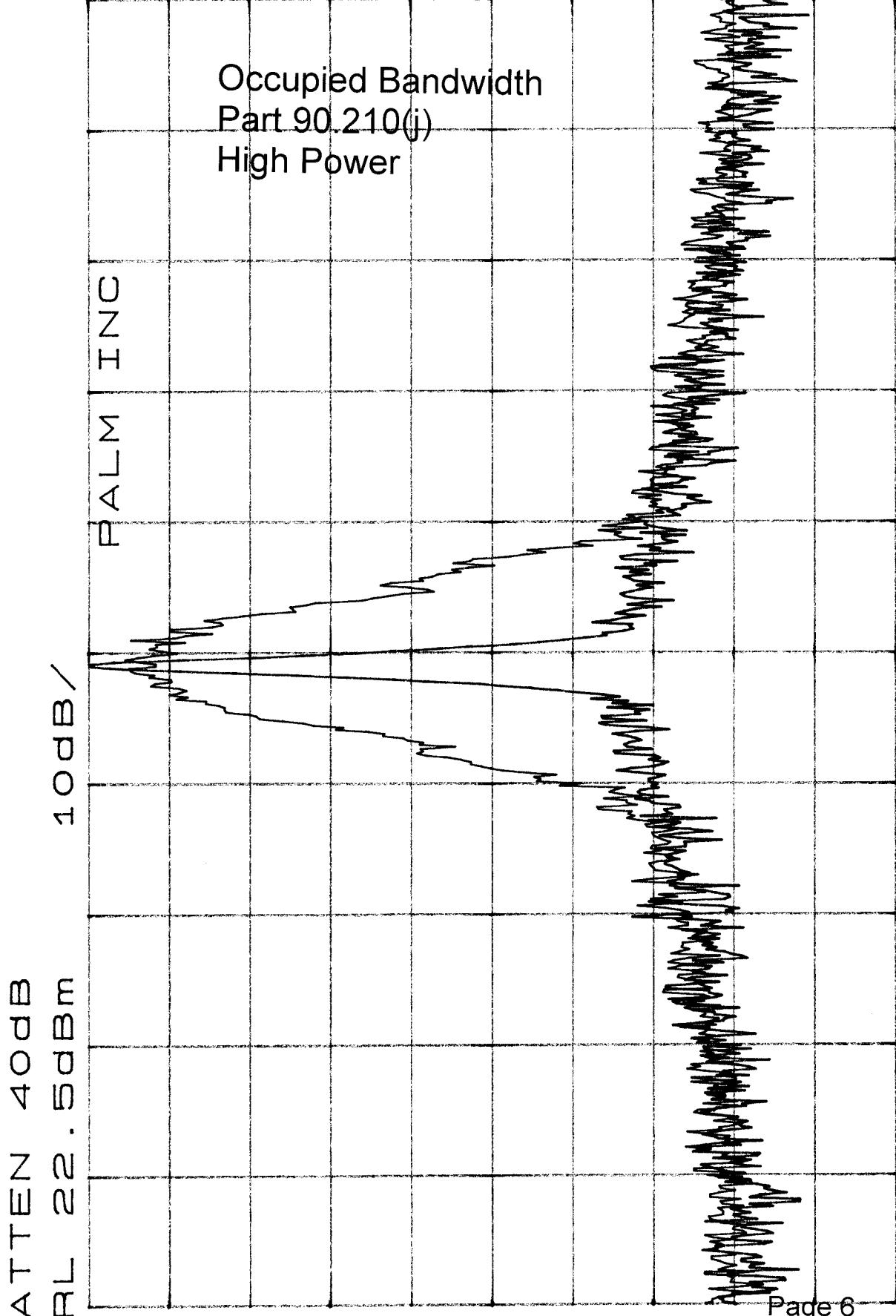


EXHIBIT VI





5/24/01 1000.0KHz  
SPAN 100.0KHz  
SWP 3.0sec  
CENTER 898.0000MHz  
\*RBW 300Hz

Applicant: Palm Inc.

FCC ID: O3WI70500

**EXHIBIT 6F            TEST: TRANSMITTER CONDUCTED SPURIOUS EMISSIONS**

FCC ID: O3WI70500

Manufacturer: Palm, Inc.

Serial No.: 60JU15110105

Minimum Standard Specified: Para. 90.210 (g)

Test Results: Equipment complies with standard

Equipment Authorization Procedure: Para. 2.1051

Frequency Range Observed: 0 to 9 GHz

Operating Frequency: 898.000 MHz

Power Output: 0.25 variable to 2 Watts  
+24 variable to +33 dBm

Spurious Limit =  $50 \text{ dB} + 10\log_{10} \text{PO} = 53 \text{ dB}$  below the carrier High Power  
 $44 \text{ dB}$  below the carrier Low power

Six plots of the transmitter conducted spurious emissions measured at the antenna terminals follow:

Low Power

1.)	Span 0 – 1.0	GHz	100kHz Resolution and Video Bandwidth
2.)	Span 0 – 2.75	GHz	1.0 MHz Resolution and Video Bandwidth
3.)	Span 2.75 – 9.0	GHz	1.0 MHz Resolution and Video Bandwidth

High Power

4.)	Span 0 – 1.0	GHz,	100kHz Resolution and Video Bandwidth
5.)	Span 0 – 2.75	GHz	1.0 MHz Resolution and Video Bandwidth
6.)	Span 2.75 – 9.0	GHz	1.0 MHz Resolution and Video Bandwidth

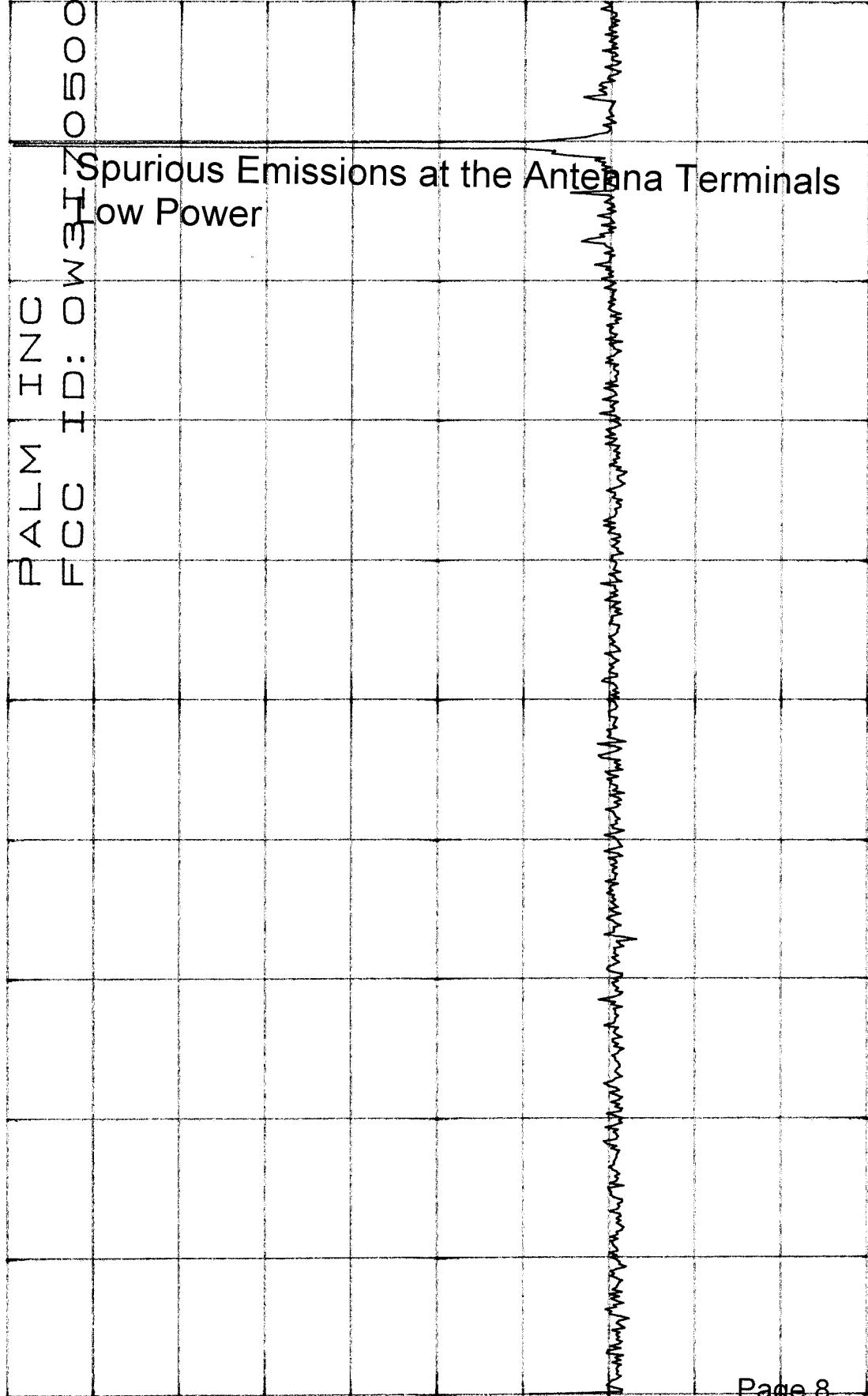
All conducted harmonic and spurious emissions were below the respective limits for low and high power operation.

Page 7

\*ATTEN 30dB

RL 14.3dBm

10dB/



Page 8

START 0HZ

\*RBW 100KHz

STOP 1.000GHz

SWP 300ms

\*ATTEN 30dB  
RL 14.3dBm

AMKR -52.66dB

903MHz

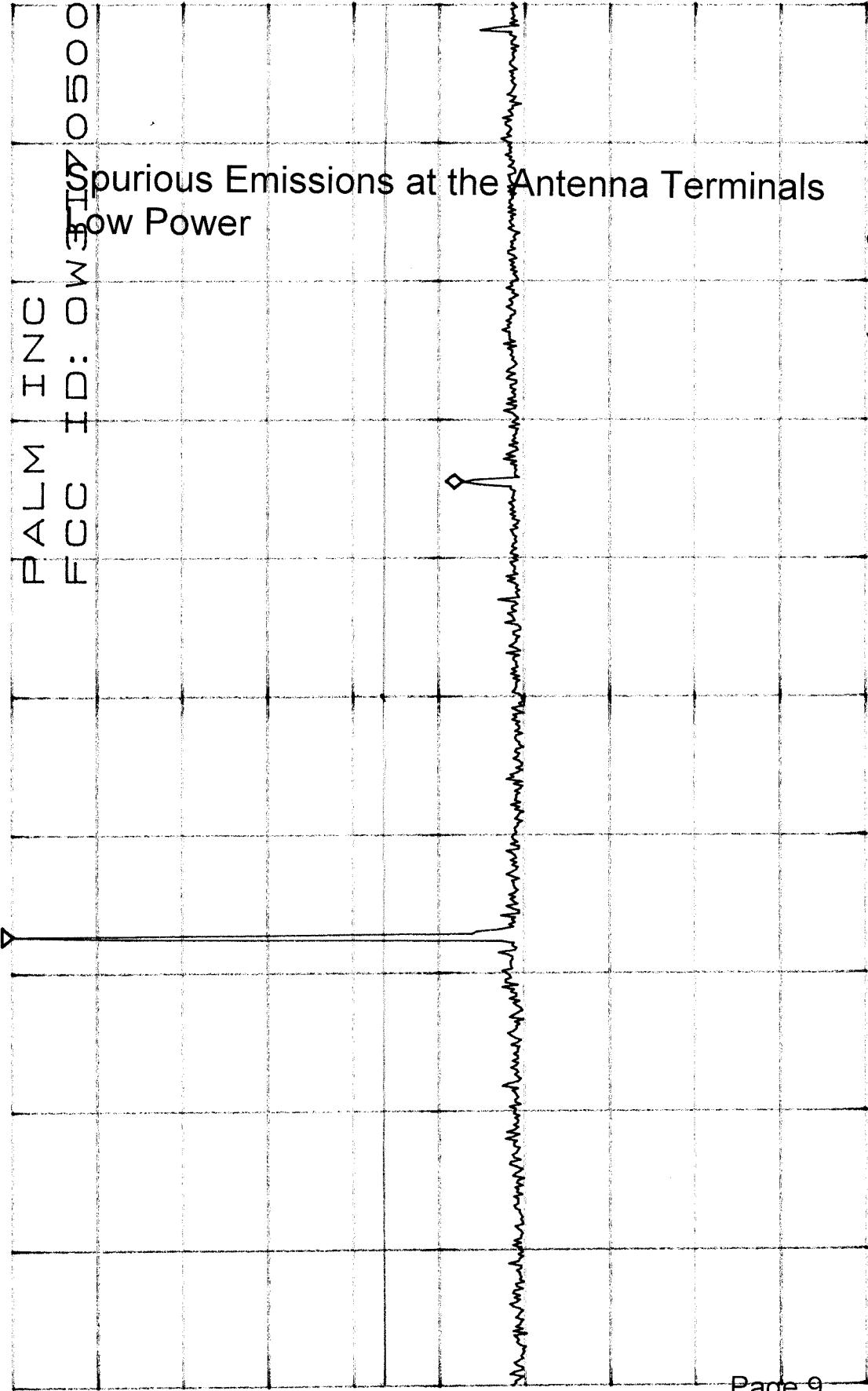


EXHIBIT VI

Page 9

\*RBW 1.0MHz

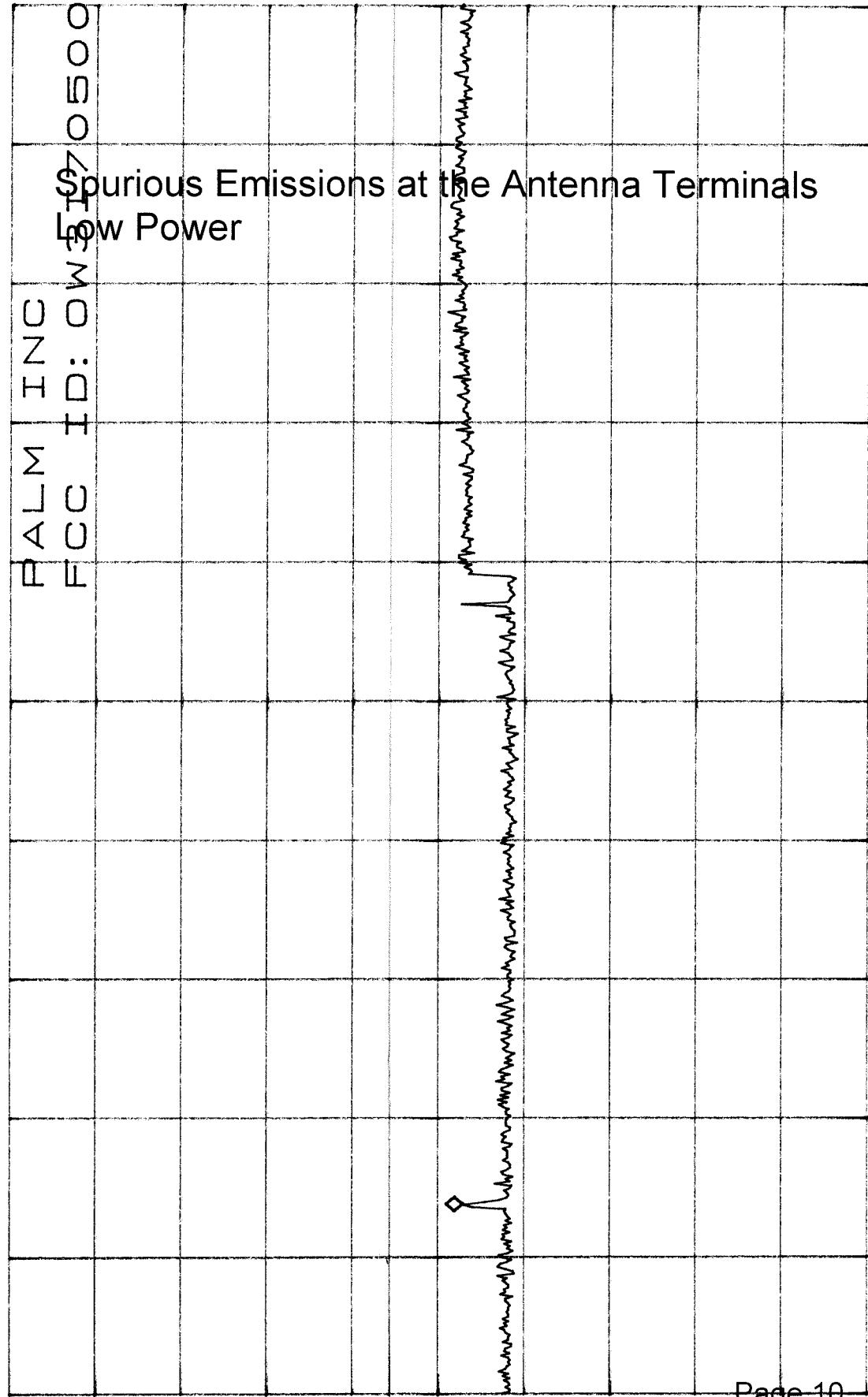
STOP 2.750GHz

SWP 60ms

START 0Hz 1.0MHz

\* ATTEN 30dB  
RL 14 . 3dBm

MKR -38 . 50dBm  
3 . 615GHz



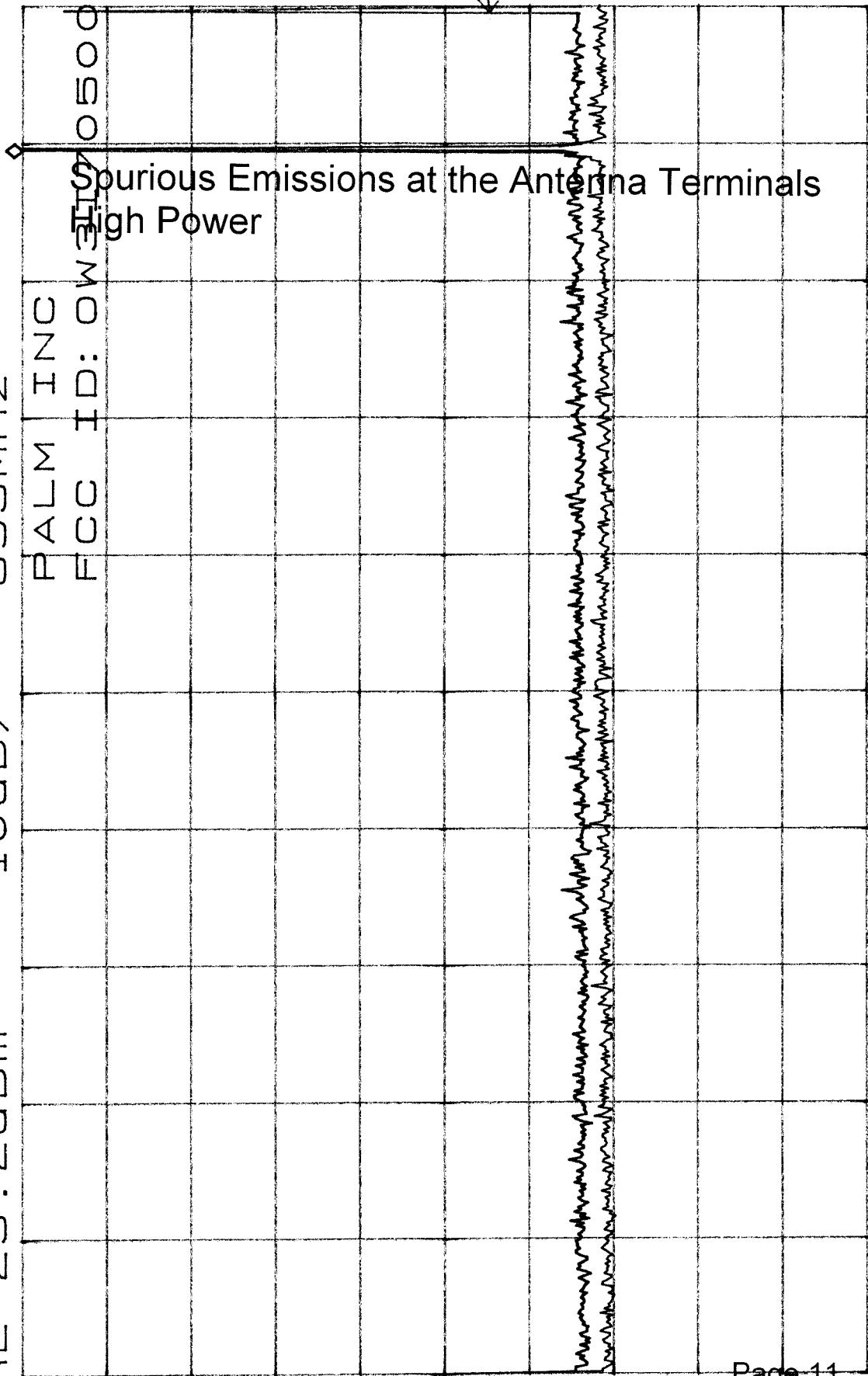
Page 10

EXHIBIT VI

5/24/01 2:15PM  
START 2 . 750GHz  
STOP 9 . 000GHz  
RBW 1 . 0MHz  
VBW 1 . 0MHz  
SWP 200ms

\* ATTEN 40dB  
RL 23 . 2dBm

MKR 23 . 17dBm  
895MHz

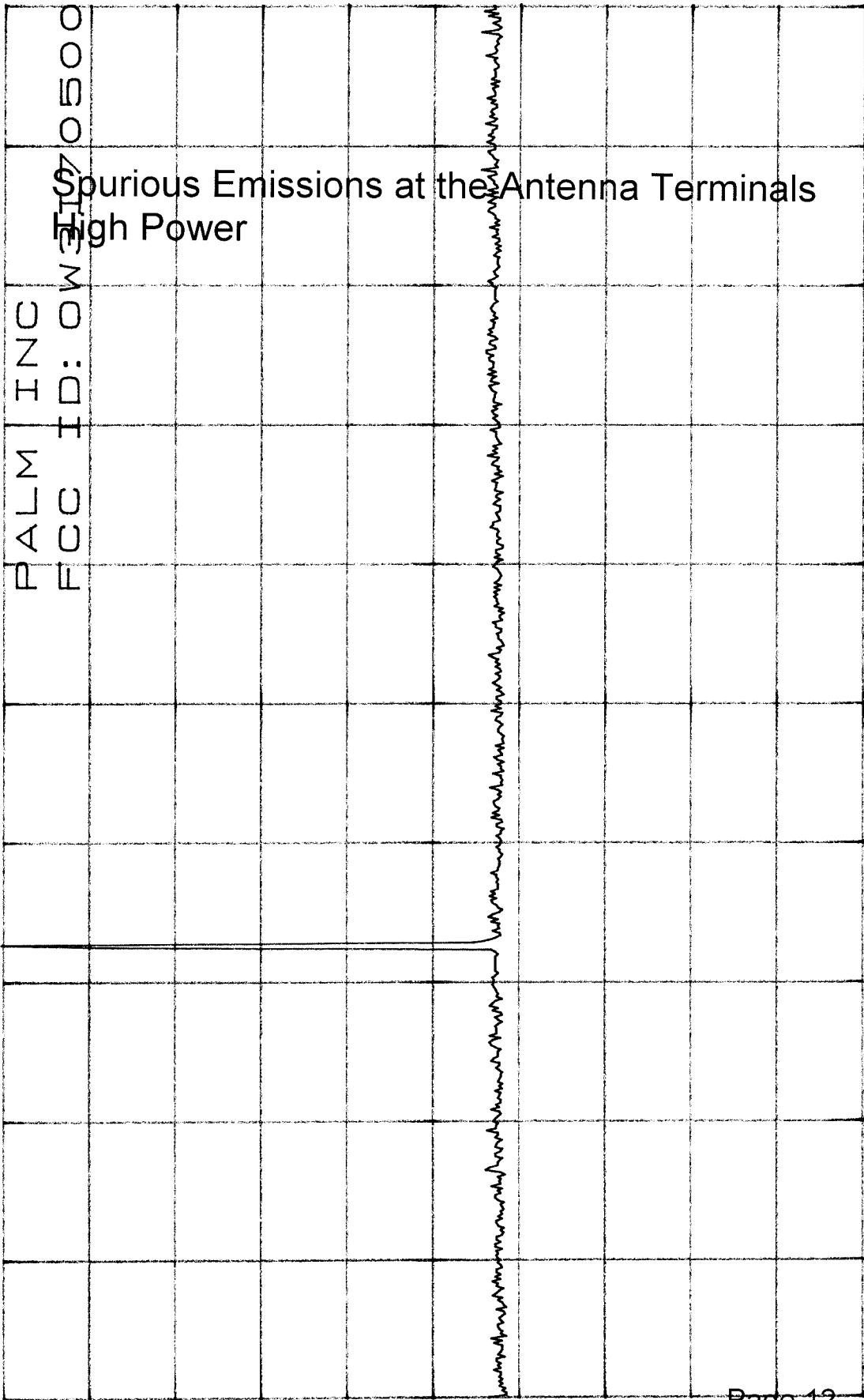


Page 11

EXHIBIT VI

\* ATTEN 40dB  
RL 23.2dBm

10dB/



STOP 2.750GHz  
START 0Hz  
RBW 1.0MHz  
VBW 1.0MHz

5/24/01 10:00 AM  
STOP 2.750GHz  
VBW 1.0MHz  
SWP 60ms

\* ATTEN 40dB  
RL 23 . 2dBm

10dB/

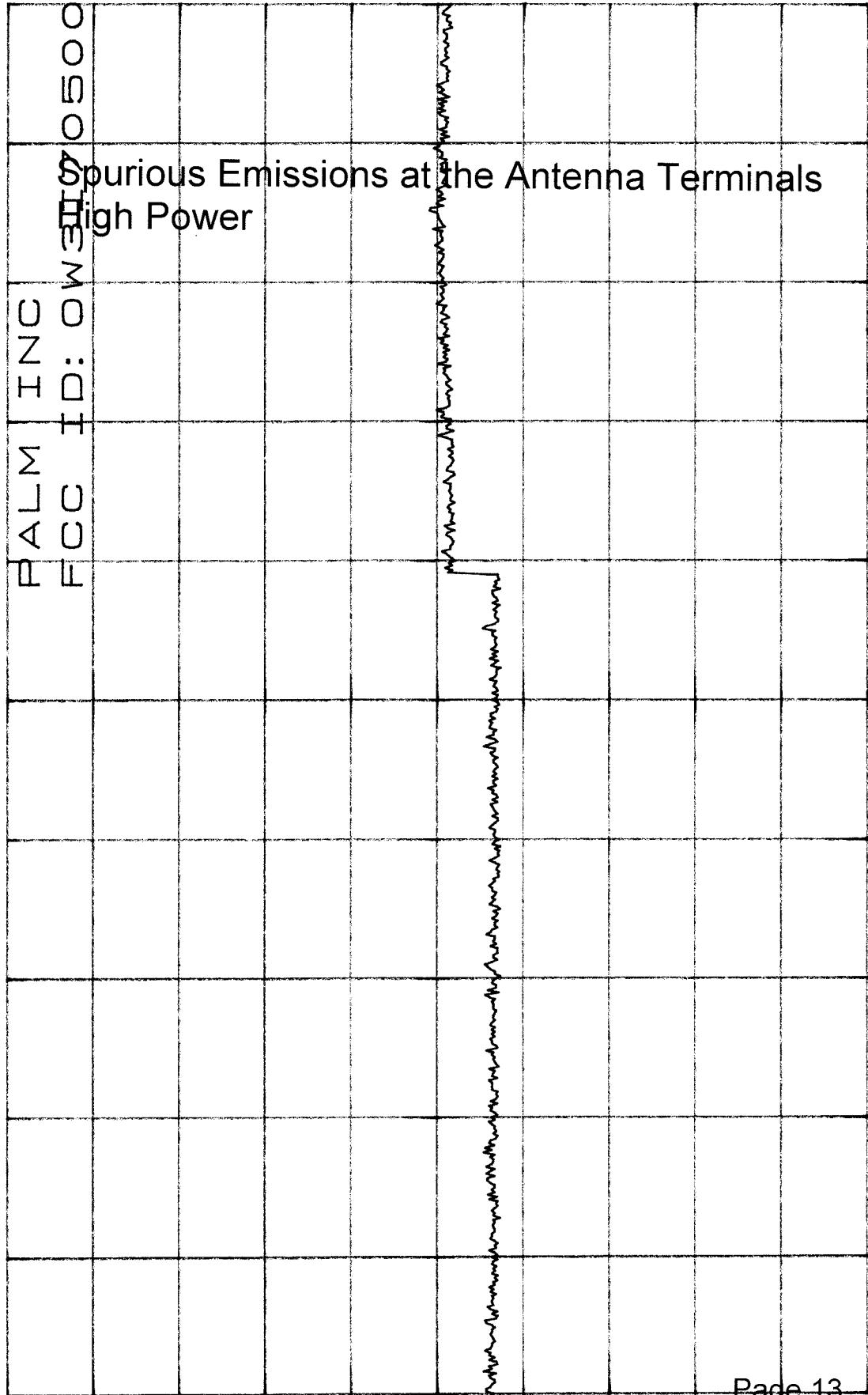


EXHIBIT VI

Applicant: Palm Inc.

FCC ID: O3WI70500

**EXHIBIT 6G            TEST: TRANSMITTER RADIATED SPURIOUS EMISSIONS**

FCC ID: O3WI70500

Manufacturer: Palm, Inc.

Serial No.: 60JU15110105

Minimum Standard Specified: Para. 90.210 (g)

Test Results: Equipment complies with standard

Equipment Authorization Procedure: Para. 2.1053

Test Equipment Set Up: See Block Diagram

Frequency Range Observed: 0 to 9 GHz

Operating Frequency: 898.000 MHz

Manufacturer's Rated Power Output: 0.25 to 2 Watts power

Transmitter maximum ERP 2.04 Watts

Spurious Limit =  $50 + 10\log_{10} PO$  =  
= 53 dB below the carrier High Power  
= 44 dB below the carrier Low Power

<u>FORMULA</u>	<u>FREQUENCY IN MHz</u>	<u>Low Power Level in dB below carrier</u>	<u>High Power</u>
F <sub>0</sub>	898.0000	-0-	-0-
2F <sub>0</sub>	1796.0000	-61.66	-70.33

At 3 meters with 1 MHz RBW and VBW all harmonic and spurious emissions up to 9 GHz not reported above were greater than 20 dB below the respective limits for both power settings.