



**Test Report:**

2W04824

**Applicant:**

Spotwave Wireless Inc.  
3701 Carling Avenue  
Ottawa, Ontario  
K2H 8S2

**Equipment Under Test:  
(EUT)**

SpotCell 100 "B"  
Low Power Cellular Band Repeater

**In Accordance With:**

**FCC Part 22, Subpart H**

**Tested By:**

Nemko Canada Inc.  
3325 River Road, R.R. 5  
Ottawa, Ontario K1V 1H2

**Authorized By:**

J. Harrington , RF Group Manager

**Date:**

15 March 2002

**Total Number of Pages:**

47

## **Table of Contents**

<b>Section 1.</b>	<b>Summary of Test Results .....</b>	<b>3</b>
<b>Section 2.</b>	<b>General Equipment Specification .....</b>	<b>5</b>
<b>Section 3.</b>	<b>RF Power Output.....</b>	<b>6</b>
<b>Section 4.</b>	<b>Occupied Bandwidth .....</b>	<b>9</b>
<b>Section 5.</b>	<b>Spurious Emissions At Antenna Terminals .....</b>	<b>19</b>
<b>Section 6.</b>	<b>Field Strength of Spurious Emissions .....</b>	<b>41</b>
<b>Section 7.</b>	<b>Frequency Stability.....</b>	<b>44</b>
<b>Section 8.</b>	<b>Block Diagrams.....</b>	<b>45</b>
<b>Section 9.</b>	<b>Test Equipment List .....</b>	<b>47</b>

## **Section 1. Summary of Test Results**

### **General**

**All measurements are traceable to national standards.**

These tests were conducted on a sample of the equipment for the purpose of demonstrating compliance with FCC Part 22, Subpart H.

THIS TEST REPORT RELATES ONLY TO THE ITEM(S) TESTED.

THE FOLLOWING DEVIATIONS FROM, ADDITIONS TO, OR EXCLUSIONS FROM THE TEST SPECIFICATIONS HAVE BEEN MADE.

See “ Summary of Test Data”.

TESTED BY: Glen Westwell, Wireless Technologist

DATE: 11 March 2002

Nemko Canada Inc., a testing laboratory, is accredited by the Standards Council of Canada. The tests included in this report are within the scope of this accreditation. The results apply only to the samples tested.

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This report applies only to the items tested.

*EQUIPMENT: SpotCell 100, Low Power Cellular Band Repeater*

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**Summary Of Test Data**

<b>Name Of Test</b>	<b>Para. No.</b>	<b>Result</b>
RF Power Output	2.1046	Complies
Audio Frequency Response	2.1047	N/A
Audio Low-Pass Filter Response	2.1047	N/A
Modulation Limiting	2.1047	N/A
Occupied Bandwidth	2.1049	Complies
Spurious Emissions at Antenna Terminals	2.1051	Complies
Field Strength of Spurious Emissions	2.1053	Complies
Frequency Stability	2.1055	Complies
Transient Frequency Behavior	—	N/A

**Note:**

This device is certified by FCC for band “A” under FCC I.D # P3YSPOTCELL0001.

**Indoor**

Temperature: 22 °C

Humidity: 31 %

**Outdoor**

Temperature: 10 °C

Humidity: 38 %

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*EQUIPMENT: SpotCell 100, Low Power Cellular Band Repeater*

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**Section 2. General Equipment Specification**

<b>Manufacturer:</b>	Spotwave Wireless Inc.
<b>Model No.:</b>	SpotCell 100 "B"
<b>Serial No.:</b>	DDU S/N A10051 SCU S/N B00062
<b>Date Received In Laboratory:</b>	Feb. 25, 2002
<b>Nemko Identification No.:</b>	DDU #1 SDU #2
<b>Supply Input Voltage:</b>	120 VAC
<b>Frequency Range:</b>	Downlink: 880 – 890 MHz 891.5 – 894 MHz  Uplink: 835 – 845 MHz 846.5 – 849 MHz
<b>RF Output (Rated):</b>	Downlink: 0dBm  Uplink: 20 dBm
<b>Antenna Gain (Integral):</b>	DDU (Uplink) = 10dBi SCU (Downlink) = 3dBi
<b>Emission Designator:</b>	CDMA DXW TDMA F9W AMPS F8W

### **Section 3. RF Power Output**

**Para. No.: 2.1046**

<b>Test Performed By:</b> Glen Westwell	<b>Date of Test:</b> 12 Mar. 2002
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**Minimum Standard:** 22.913(a)

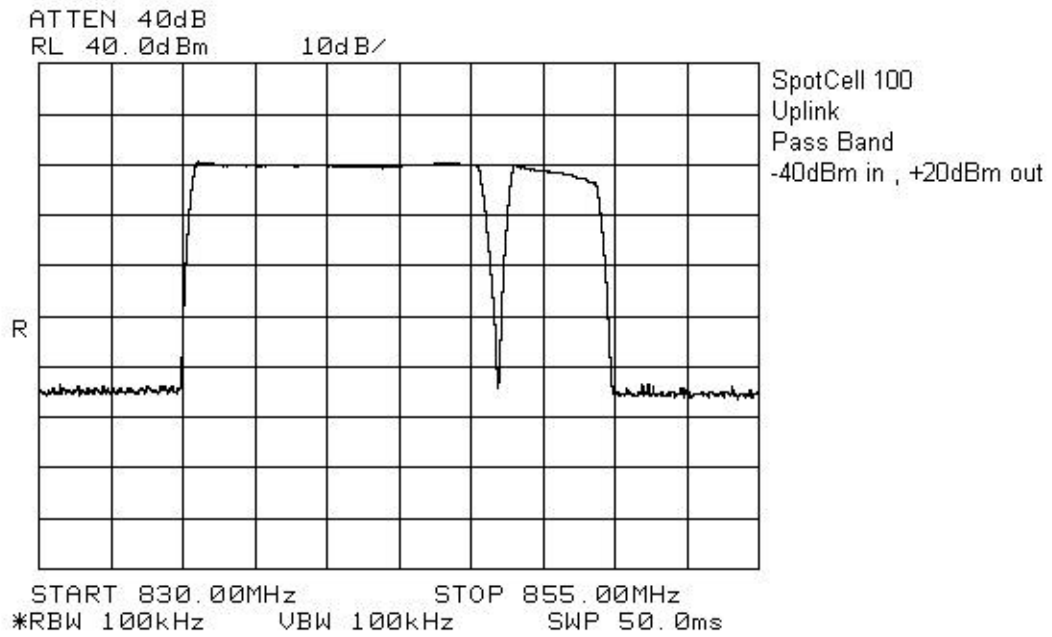
**Test Results:** Complies.

The maximum RF output power is within  $\pm 1$ dB of the manufacturer's rating. The RF output power is de-rated according to the number of channels via AGE and is equal to  $P_{max} - 10\log N$ .

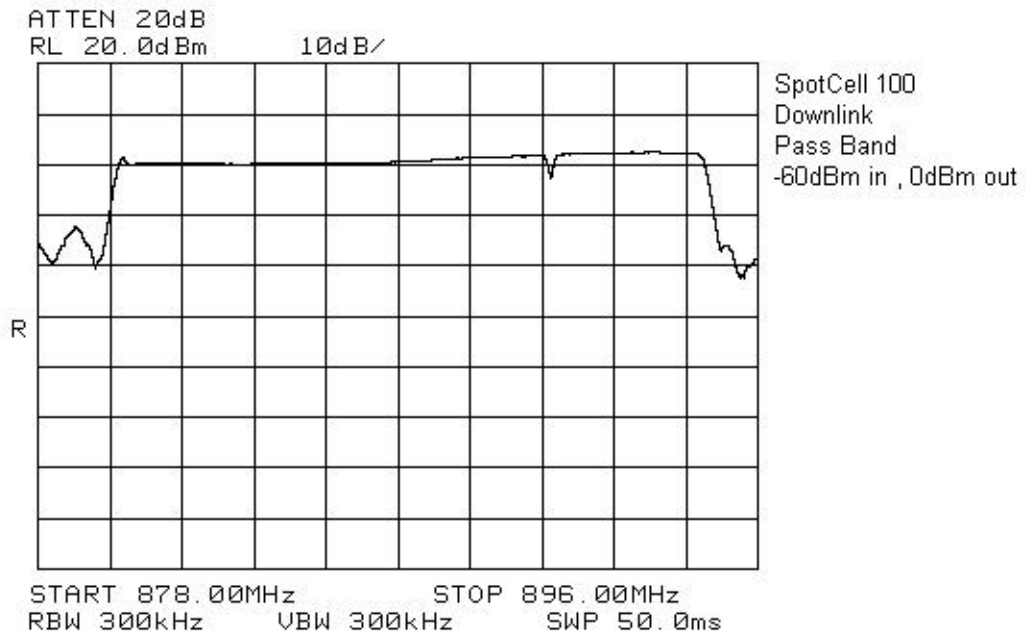
$P_{max}$  = Maximum RF Output Power  
N = Number Of Channels

EQUIPMENT: SpotCell 100, Low Power Cellular Band Repeater

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EQUIPMENT: SpotCell 100, Low Power Cellular Band Repeater





*EQUIPMENT: SpotCell 100, Low Power Cellular Band Repeater*

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## **Section 4.        Occupied Bandwidth**

**Para. No.: 2.1049**

<b>Test Performed By:</b> Glen Westwell	<b>Date of Test:</b> 12 Mar. 2002
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**Minimum Standard:**        22.917

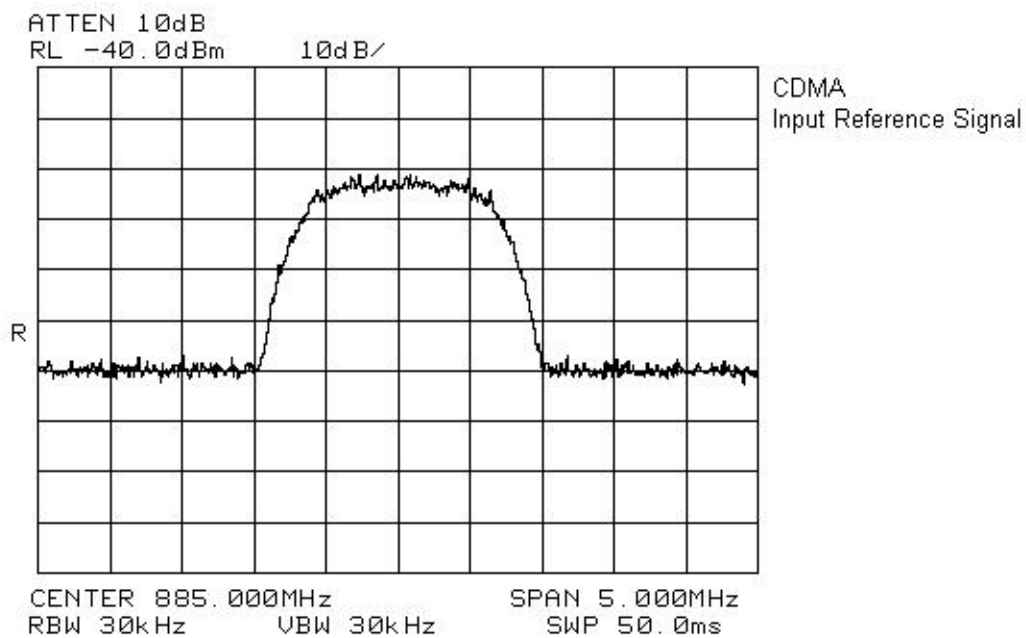
**Test Results:**                Complies.

**Measurement Data:**        See attached graphs.

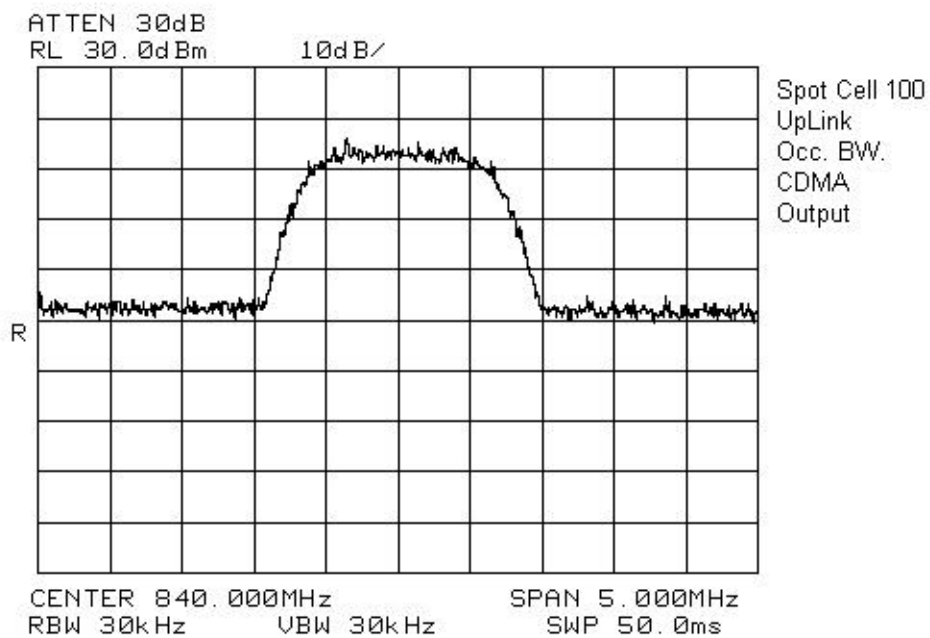
The occupied bandwidth was measured by comparison of input to the output signal. This was done in order to determine if there was any degradation to the output signal due to the amplification through the repeater.

EQUIPMENT: SpotCell 100, Low Power Cellular Band Repeater

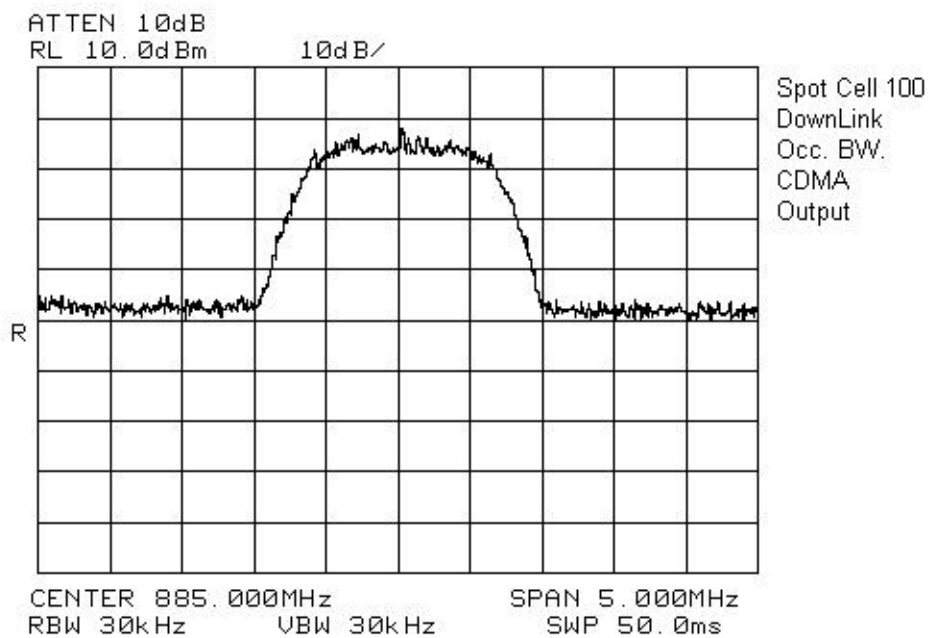
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EQUIPMENT: SpotCell 100, Low Power Cellular Band Repeater

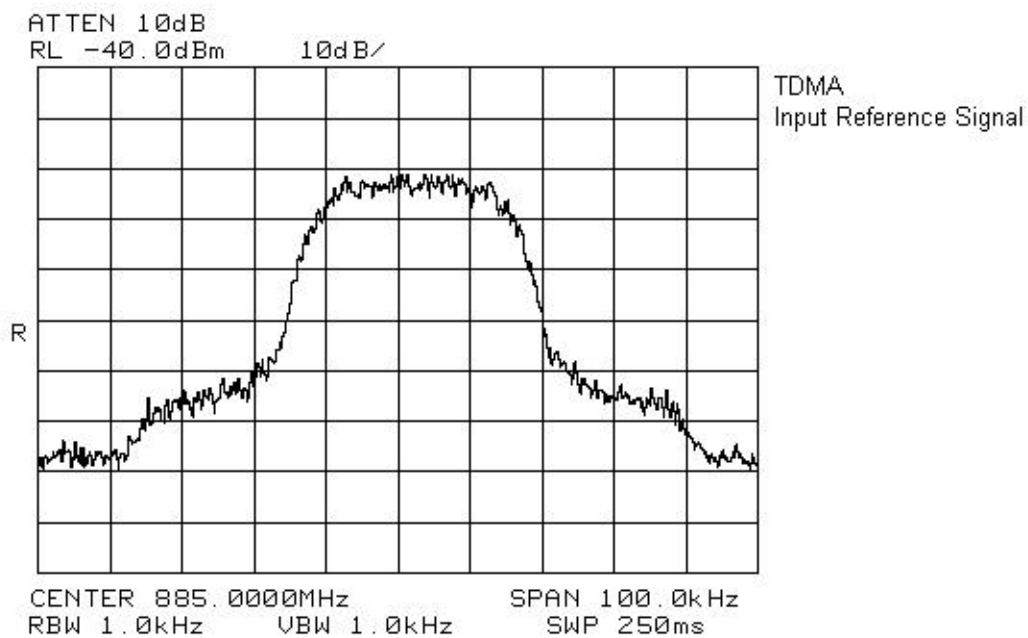


EQUIPMENT: SpotCell 100, Low Power Cellular Band Repeater



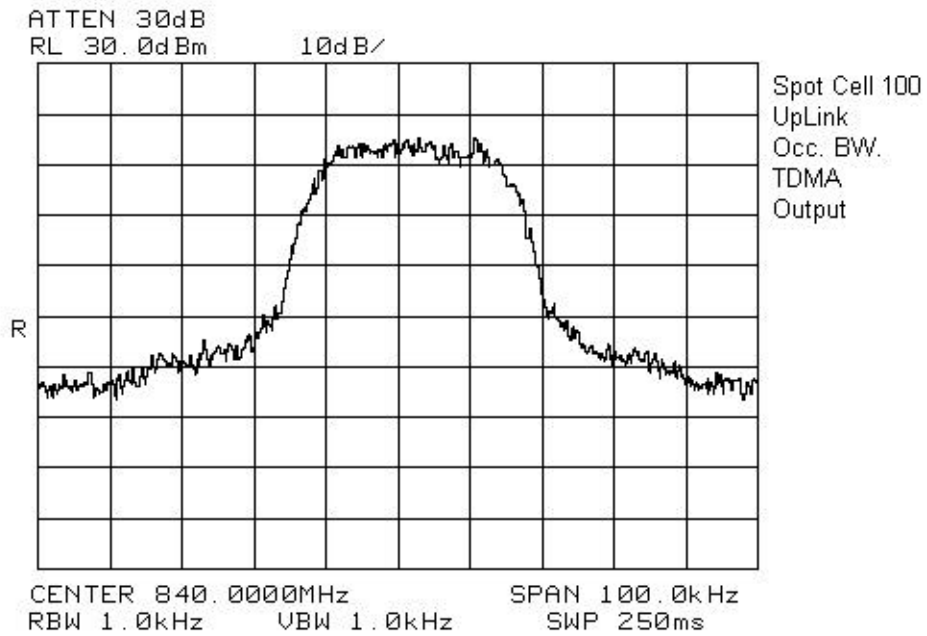
EQUIPMENT: SpotCell 100, Low Power Cellular Band Repeater

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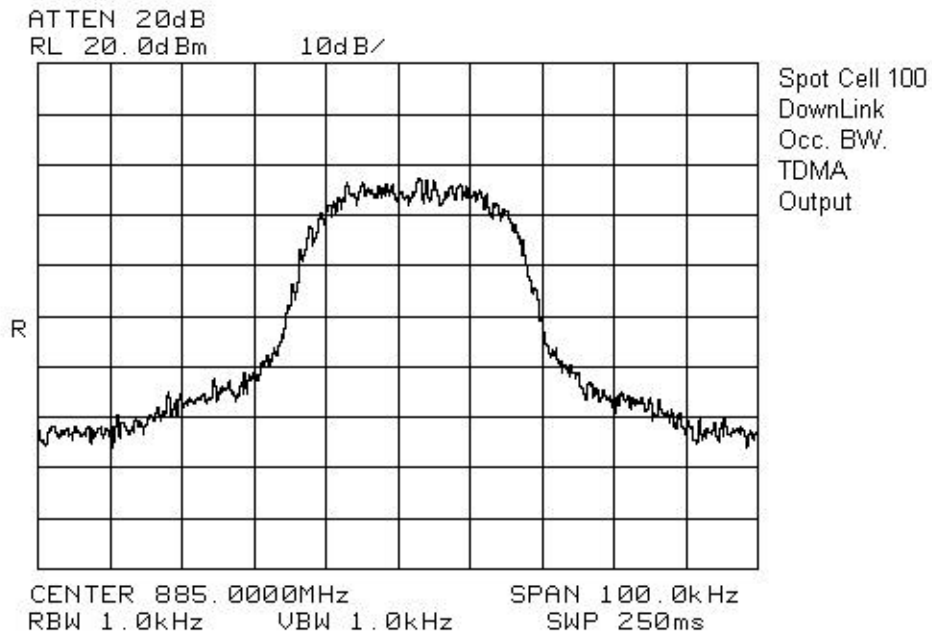
EQUIPMENT: SpotCell 100, Low Power Cellular Band Repeater

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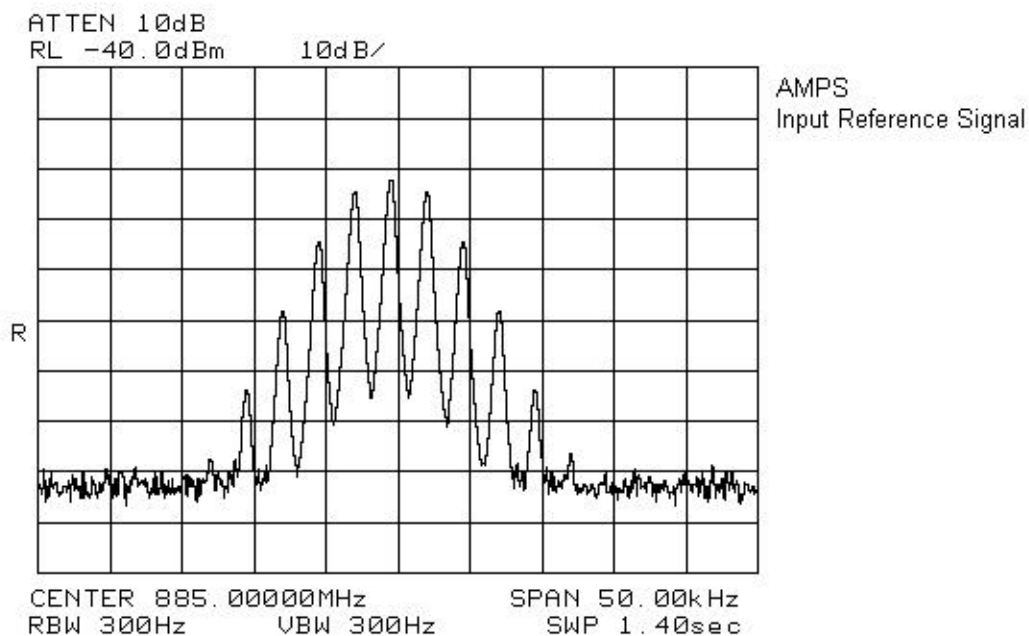
EQUIPMENT: SpotCell 100, Low Power Cellular Band Repeater

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EQUIPMENT: SpotCell 100, Low Power Cellular Band Repeater

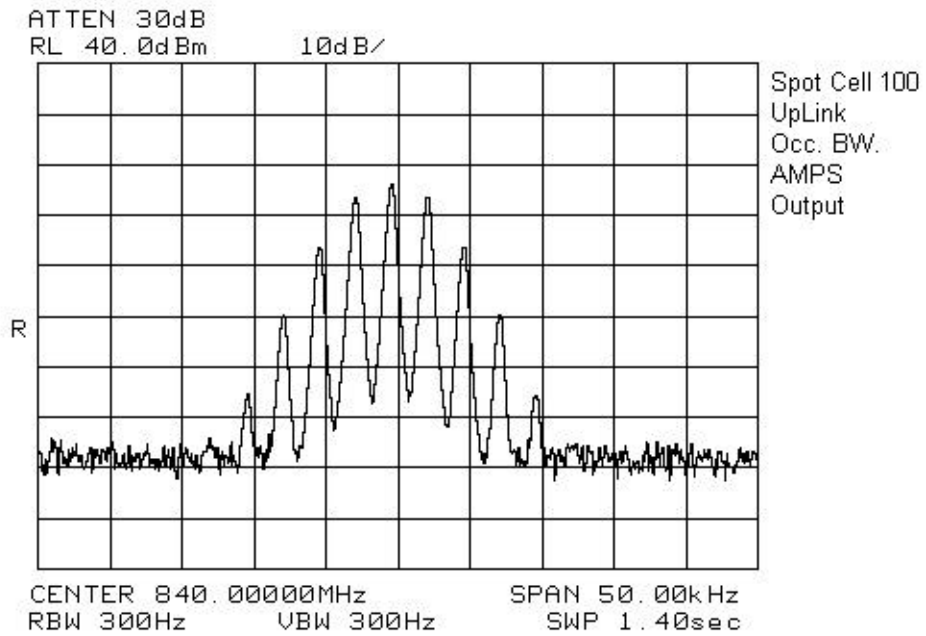
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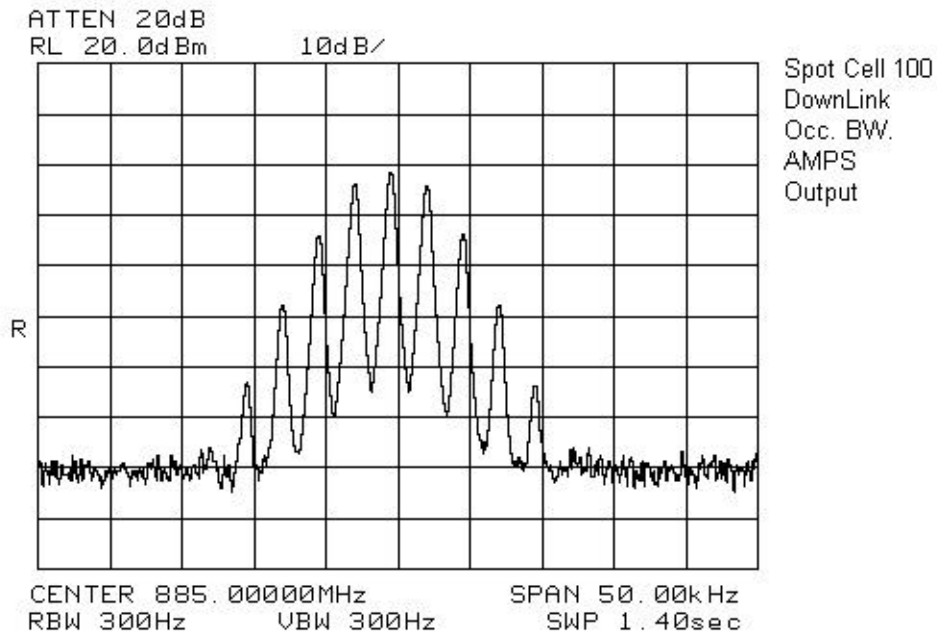


EQUIPMENT: SpotCell 100, Low Power Cellular Band Repeater

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EQUIPMENT: SpotCell 100, Low Power Cellular Band Repeater



## **Section 5. Spurious Emissions At Antenna Terminals**

**Para. No.: 2.1051**

<b>Test Performed By:</b> Glen Westwell	<b>Date of Test:</b> 14 Mar. 2002
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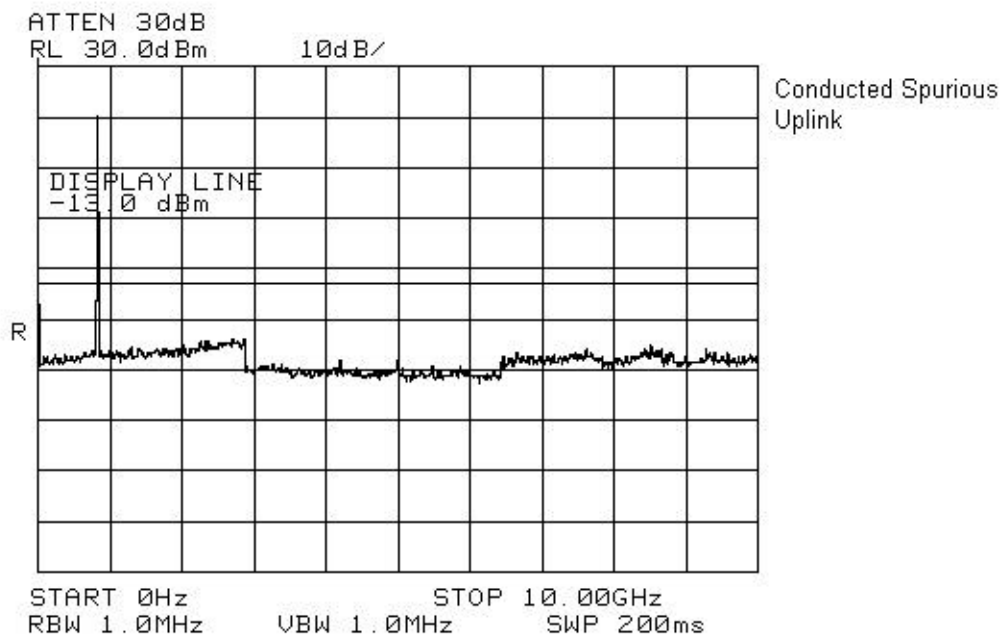
**Minimum Standard:** 22.917 (e); -13 dBm  
(f); -80 dBm Conducted

**Test Results:** Complies.

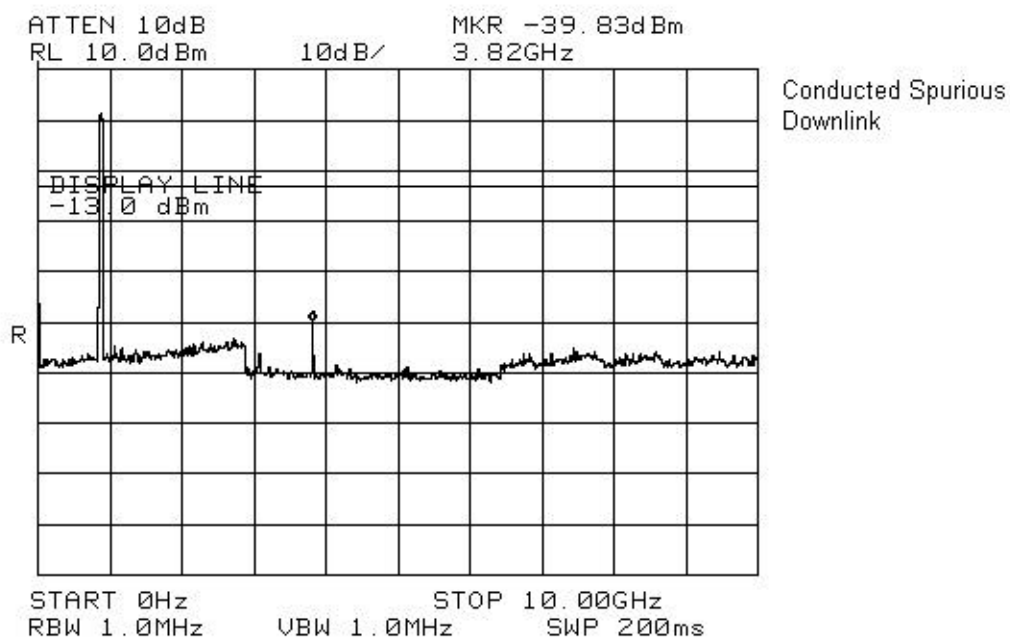
**Measurement Data:** See attached graphs (worst case).

EQUIPMENT: SpotCell 100, Low Power Cellular Band Repeater

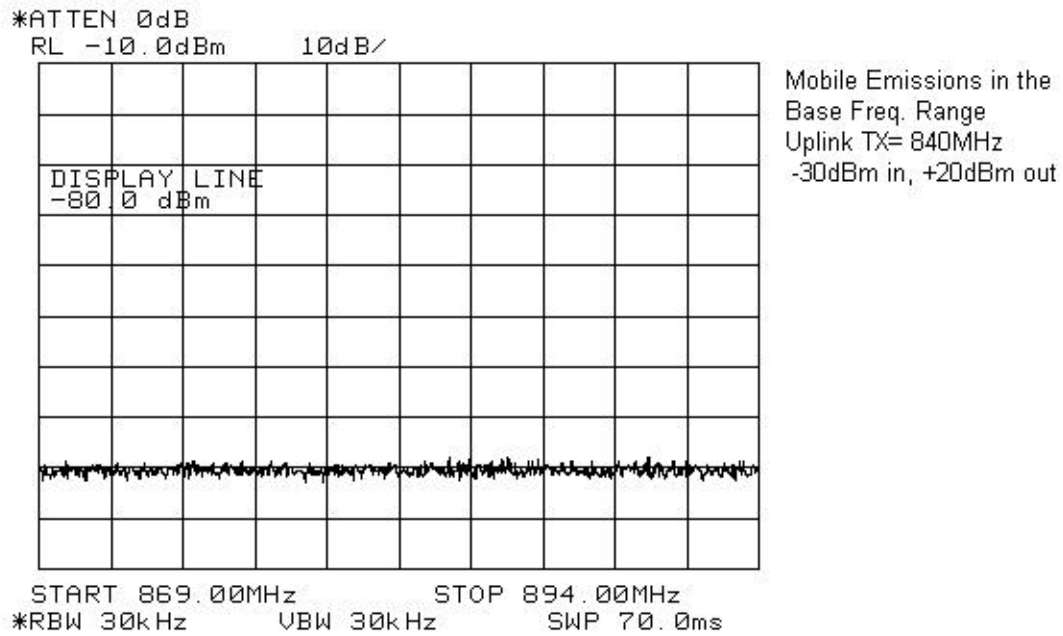
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EQUIPMENT: SpotCell 100, Low Power Cellular Band Repeater



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