



**Test Report:** 3W07345


**Applicant:** Dekolink Wireless Ltd.  
16 Bazel St. Qiryat-Arieh  
Petah-Tikva, 49510  
Israel

**Equipment Under Test:  
(EUT)** MW-CBDA-800AB-1W60-PG2  
Bi-Directional Amplifier

**FCC ID:** OIWCBDA800AB1W60

**In Accordance With:** **FCC Part 22**

**Tested By:** Nemko Canada Inc.  
303 River Road, R.R. 5  
Ottawa, Ontario K1V 1H2

**Authorized By:**   
Kevin Carr, EMC Specialist

**Date:** 30 October 2003

**Total Number of Pages:** 27

*EQUIPMENT:* MW-CBDA-800AB-1W60-PG2

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EQUIPMENT: MW-CBDA-800AB-1W60-PG2

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## 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.



New Submission



Production Unit



Class II Permissive Change



Pre-Production Unit



Equipment Code

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: \_\_\_\_\_ DATE: 29 October 2003  
Glen Westwell, Wireless Technologist

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This report applies only to the items tested.

*EQUIPMENT:* MW-CBDA-800AB-1W60-PG2

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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
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	N/A

**Footnotes For N/A's:**

All Tests were conducted with the AGC circuitry enabled, and verified with AGC disabled.  
The EUT is an f1-f1 amplifier, as such frequency stability was not performed.

**Indoor**                      Temperature: 23°C  
                                    Humidity:     15%

**Outdoor**                    Temperature: 12°C  
                                    Humidity:     60%

*EQUIPMENT:* MW-CBDA-800AB-1W60-PG2

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## **Section 2.        General Equipment Specification**

<b>Manufacturer:</b>	Dekolink Wireless Ltd.
<b>Model No.</b>	MW-CBDA-800AB-1W60-PG2
<b>Serial No:</b>	03074157
<b>Date Received In Laboratory:</b>	15 Oct 2003
<b>Nemko Identification No.:</b>	#1
<b>Supply Voltage:</b>	120VAC, 60Hz
<b>Frequency Range:</b>	Downlink: 869-894MHz Uplink: 824-849 MHz
<b>RF Output Power (Rated):</b>	Downlink: 27.0dBm (0.5W) Uplink: 27.0dBm (0.5W)
<b>Modulation:</b>	TDMA & CDMA
<b>Emission Designator:</b>	DXW – TDMA F9W - CDMA

*EQUIPMENT:* MW-CBDA-800AB-1W60-PG2

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**Section 3. RF Power Output**

Para. No.: 2.1046

<b>Test Performed By: Glen Westwell</b>	<b>Date of Test: 28 Oct 2003</b>
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**Minimum Standard:** 22.913(a)**Test Results:** Complied.

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 AGC and is equal to  $P_{\max} - 10\log N$ .

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

<b>Frequency (MHz)</b>	<b>Measured Power (dBm)</b>	<b>Rated Power (dBm)</b>
869	26.2	27.0
881	27.3	27.0
894	26.4	27.0
824	27.1	27.0
836	27.3	27.0
849	26.5	27.0

*EQUIPMENT:* MW-CBDA-800AB-1W60-PG2

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## **Section 4.        Occupied Bandwidth**

**Para. No.: 2.1049**

<b>Test Performed By: Glen Westwell</b>	<b>Date of Test: 27 Oct 2003</b>
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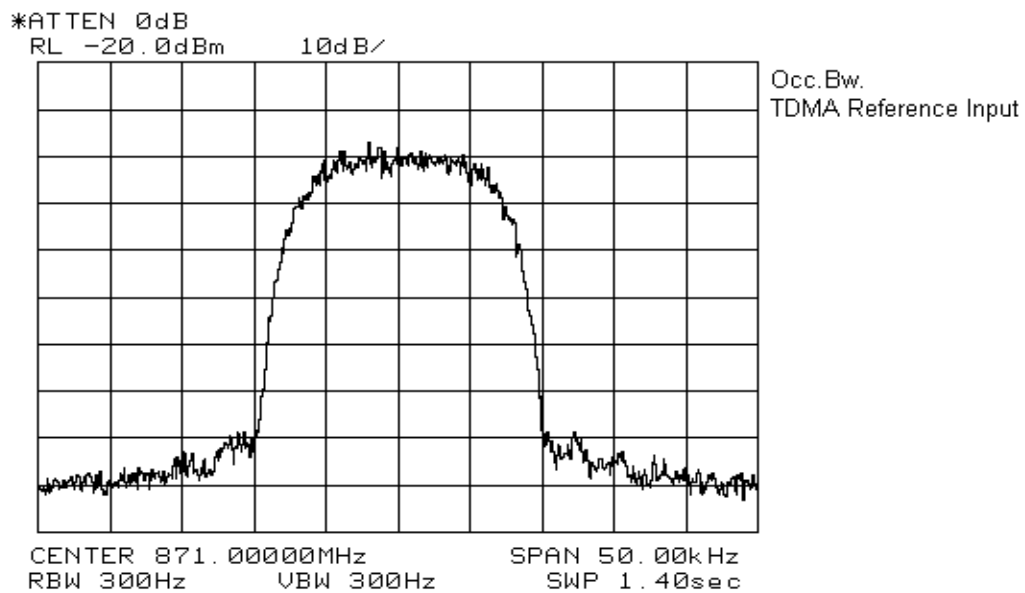
**Minimum Standard:**        22.917, Input vs Output

**Test Results:**                Complied.

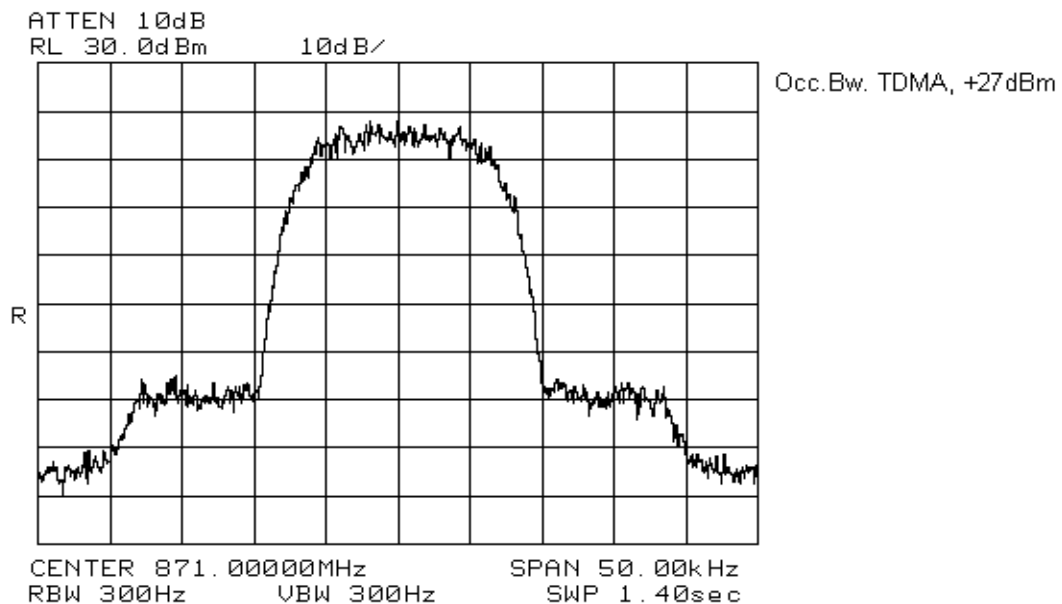
**Measurement Data:**        See attached graphs.

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: MW-CBDA-800AB-1W60-PG2



## Downlink

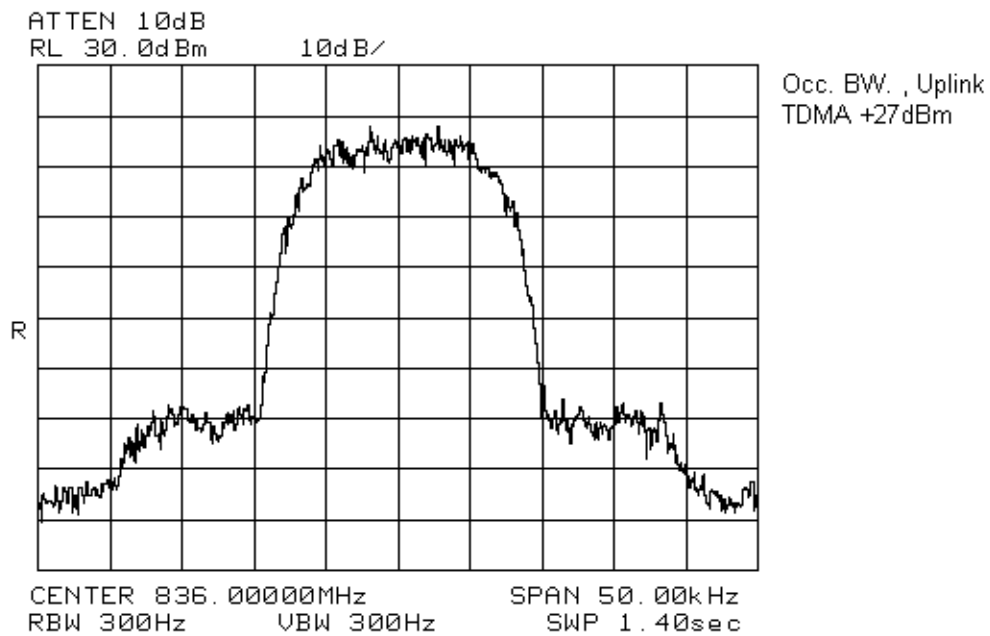




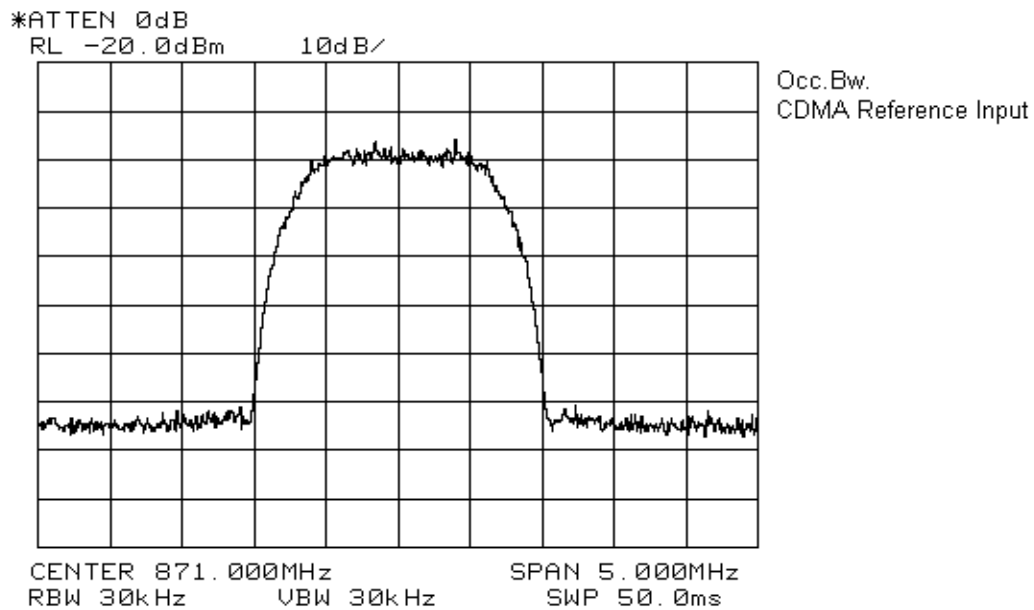
EQUIPMENT: MW-CBDA-800AB-1W60-PG2

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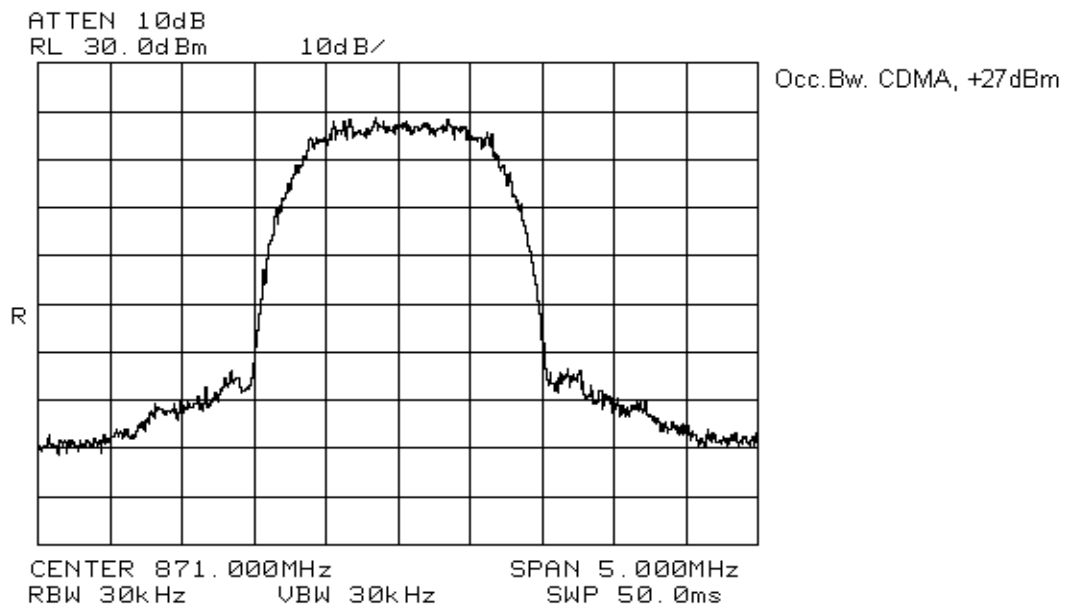
Uplink



EQUIPMENT: MW-CBDA-800AB-1W60-PG2



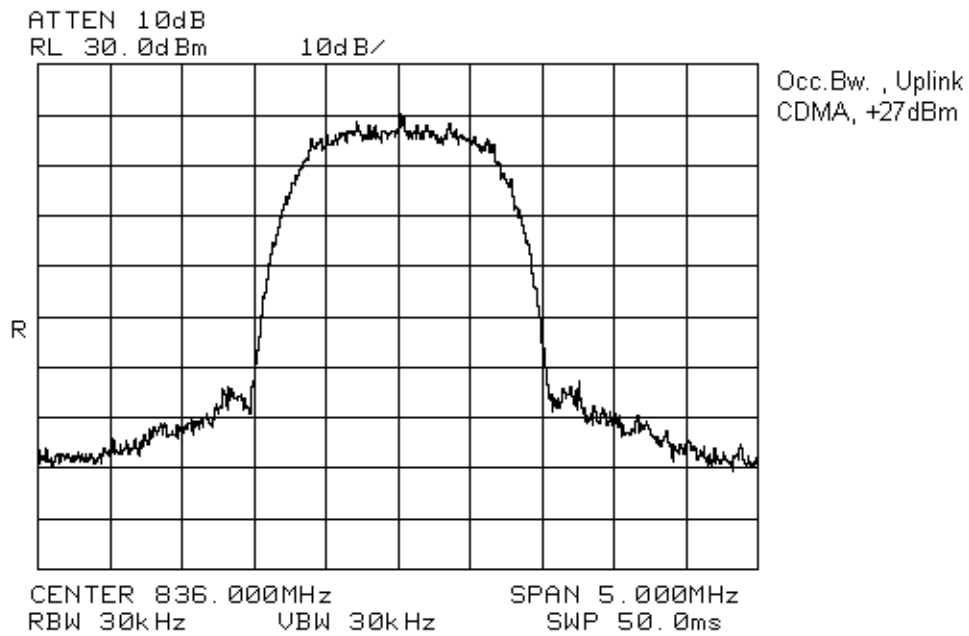
Downlink



EQUIPMENT: MW-CBDA-800AB-1W60-PG2

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Uplink



*EQUIPMENT:* MW-CBDA-800AB-1W60-PG2

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

**Para. No.: 2.1051**

<b>Test Performed By: Glen Westwell</b>	<b>Date of Test: 27 Oct 2003</b>
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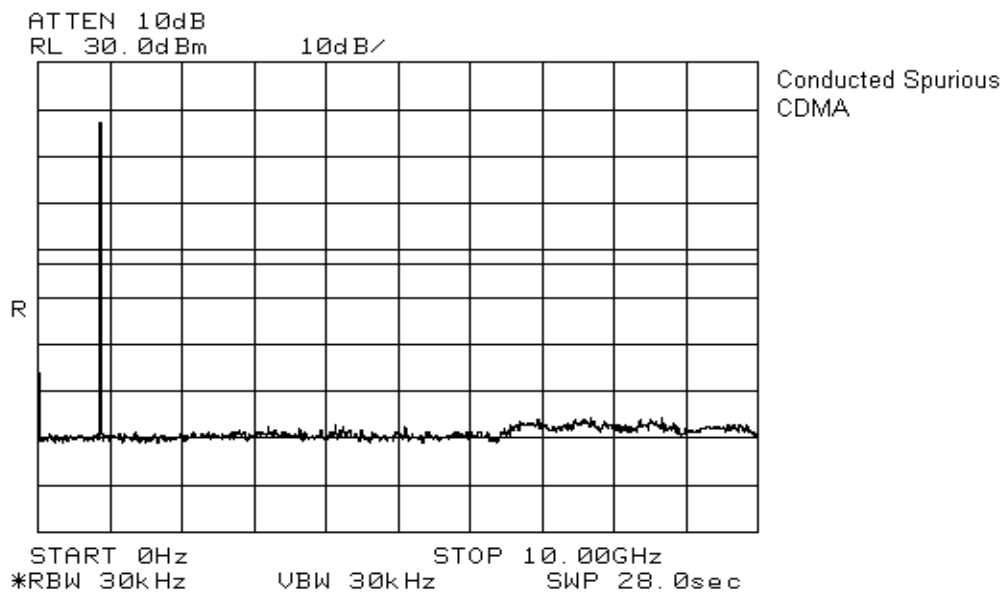
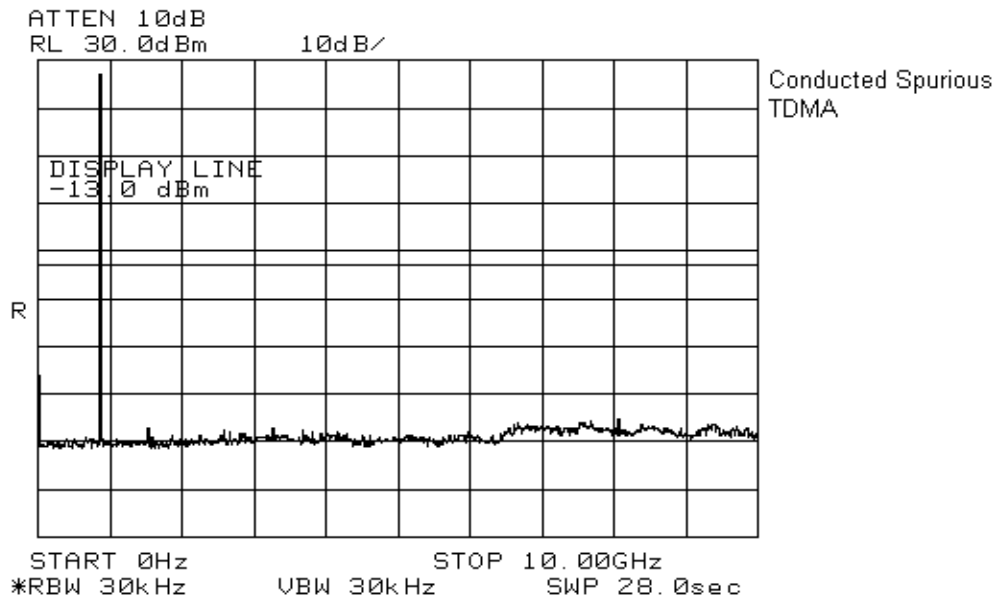
**Minimum Standard:**        22.917(e): -13dBm

**Test Results:**                Complied.

**Measurement Data:**        See attached graph(s).

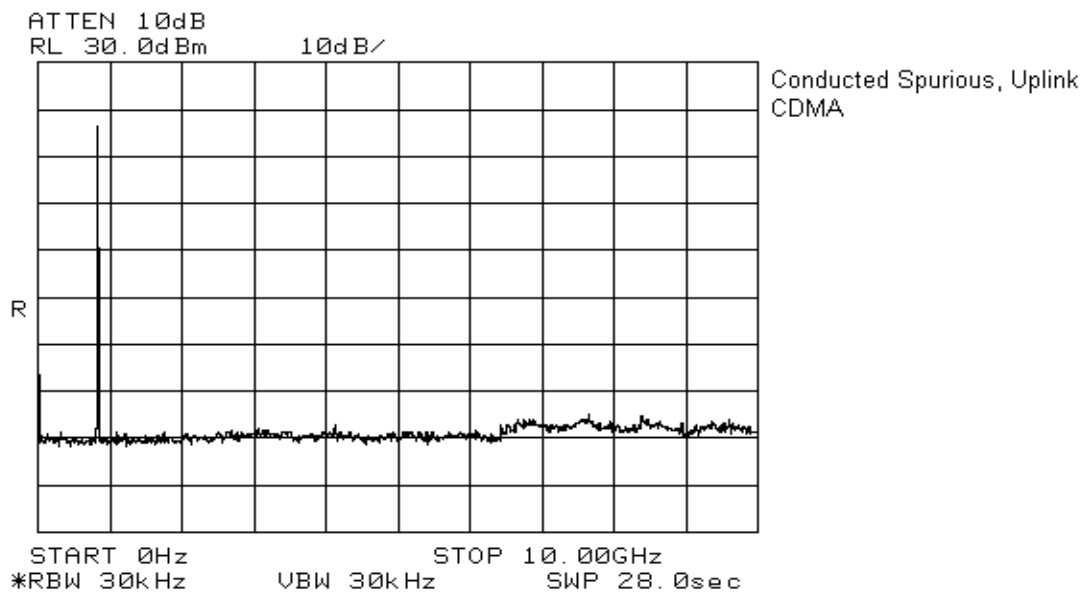
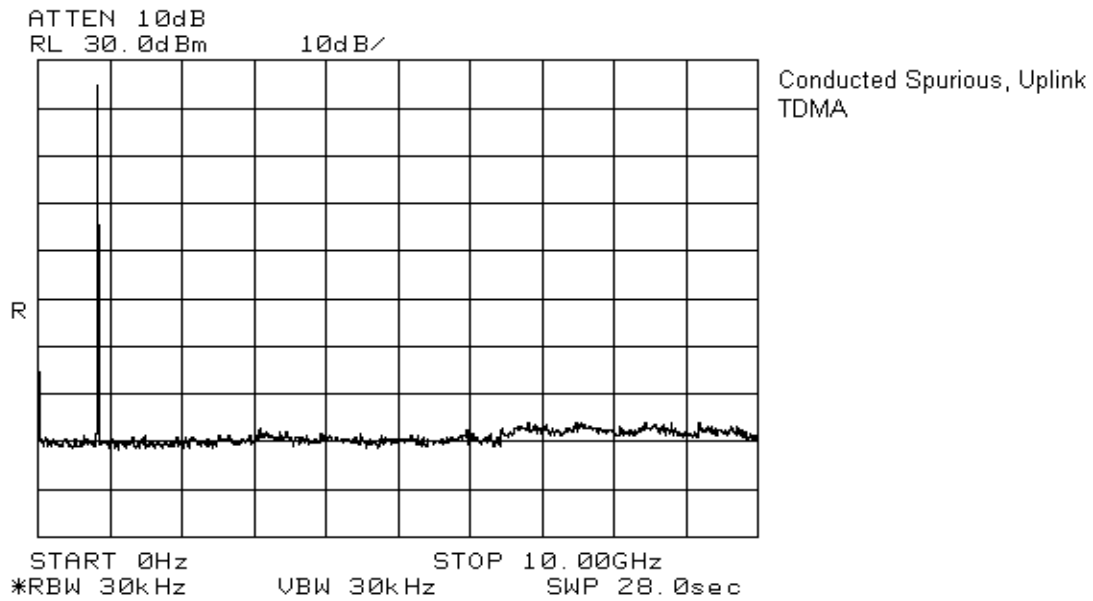
EQUIPMENT: MW-CBDA-800AB-1W60-PG2

Downlink

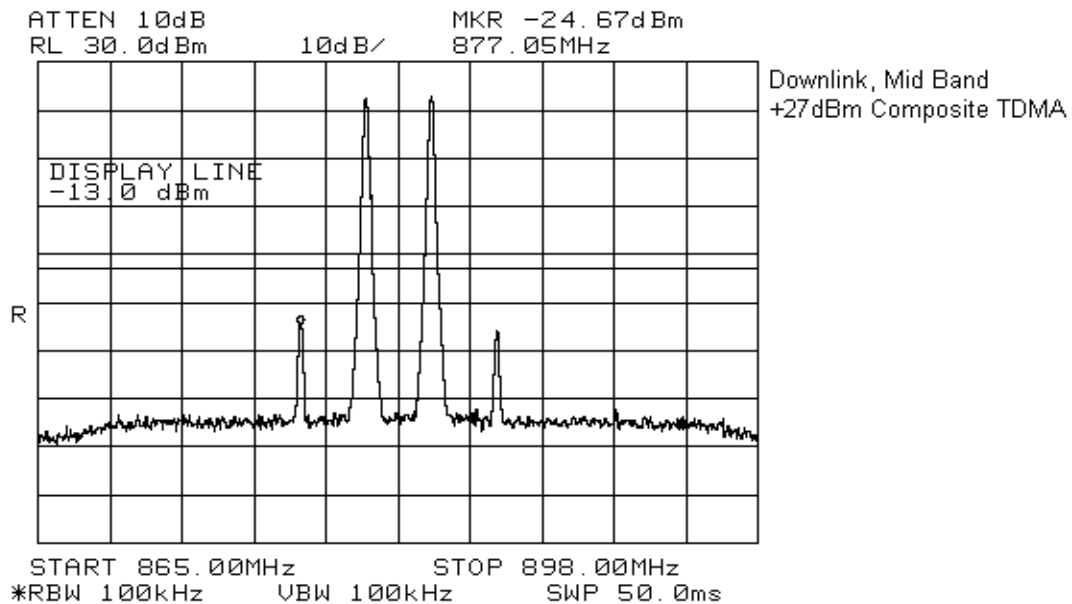
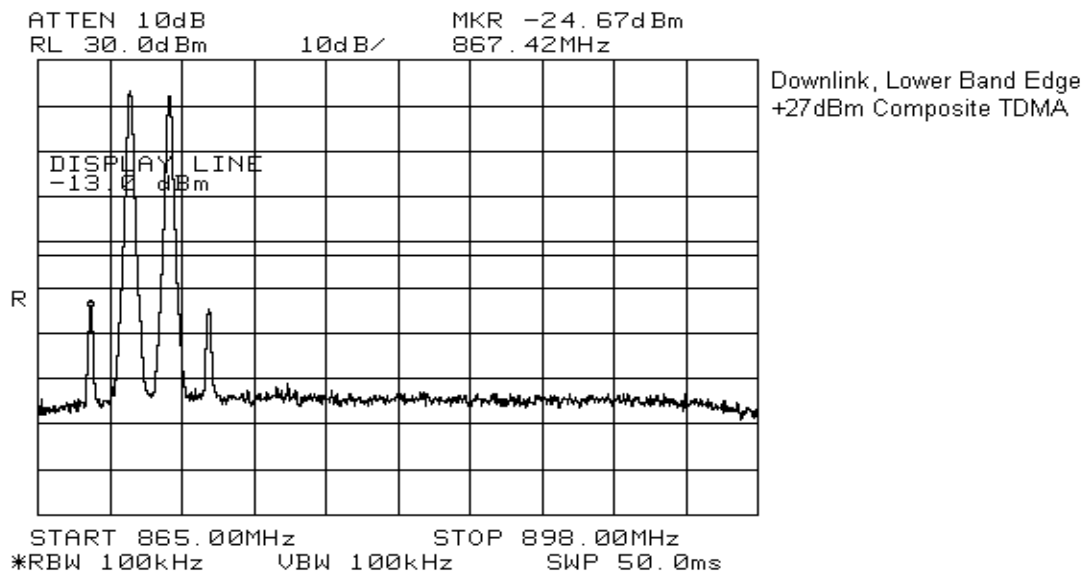


EQUIPMENT: MW-CBDA-800AB-1W60-PG2

Uplink

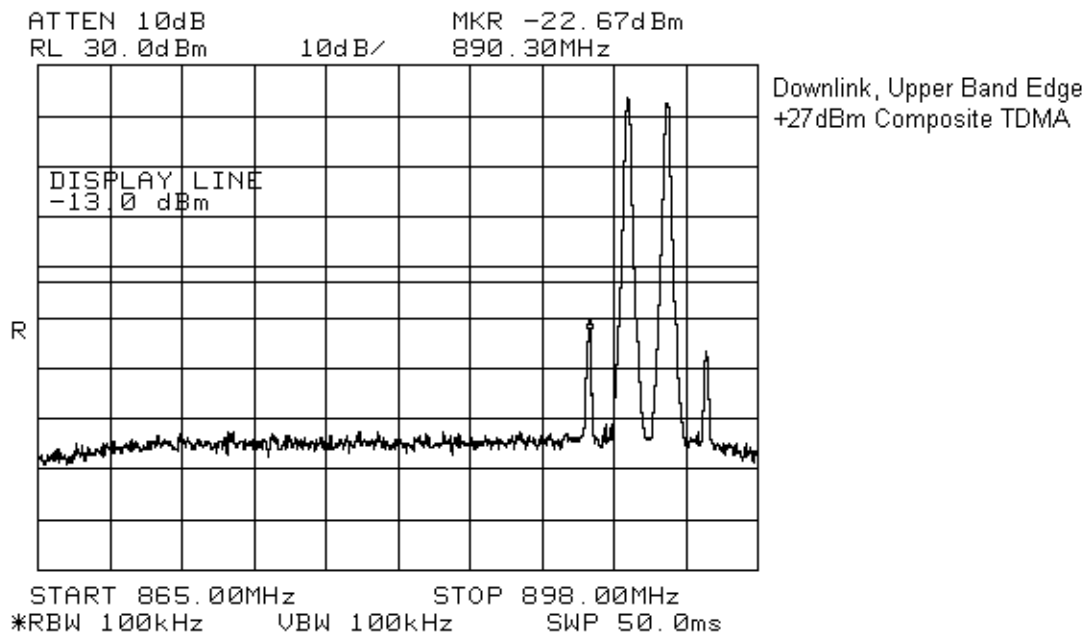


EQUIPMENT: MW-CBDA-800AB-1W60-PG2



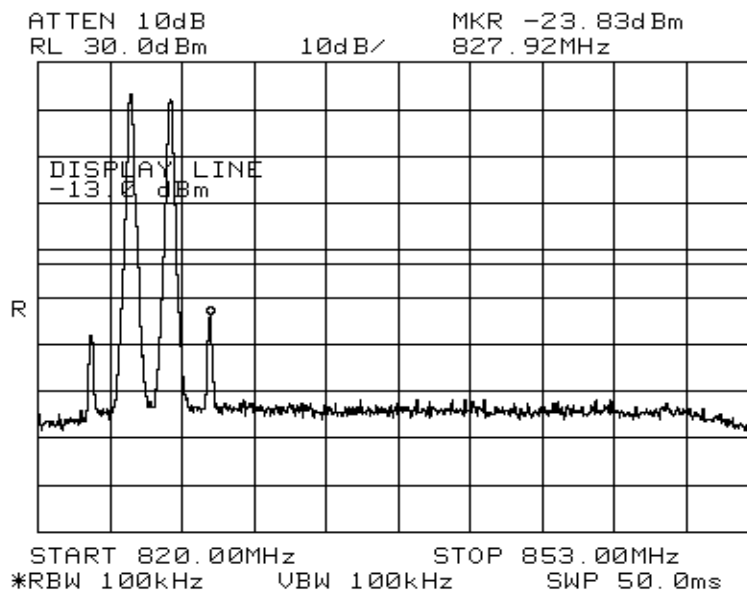
EQUIPMENT: MW-CBDA-800AB-1W60-PG2

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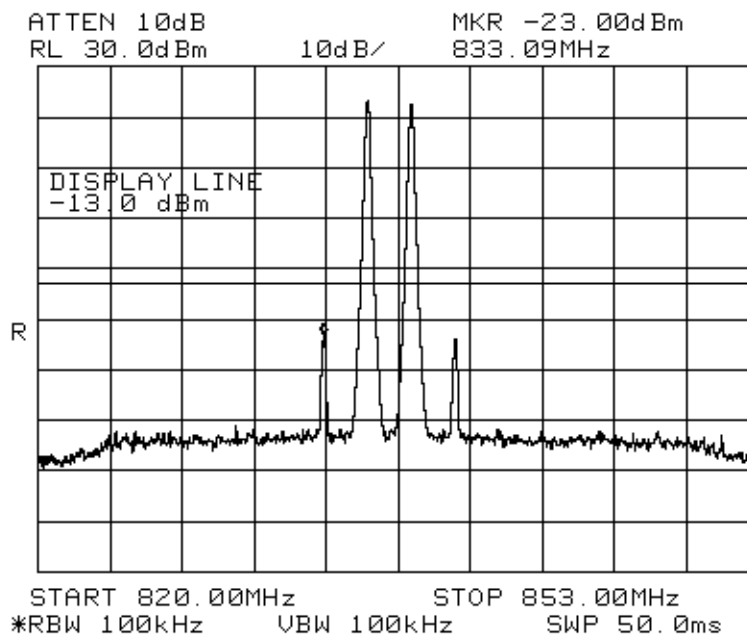




EQUIPMENT: MW-CBDA-800AB-1W60-PG2

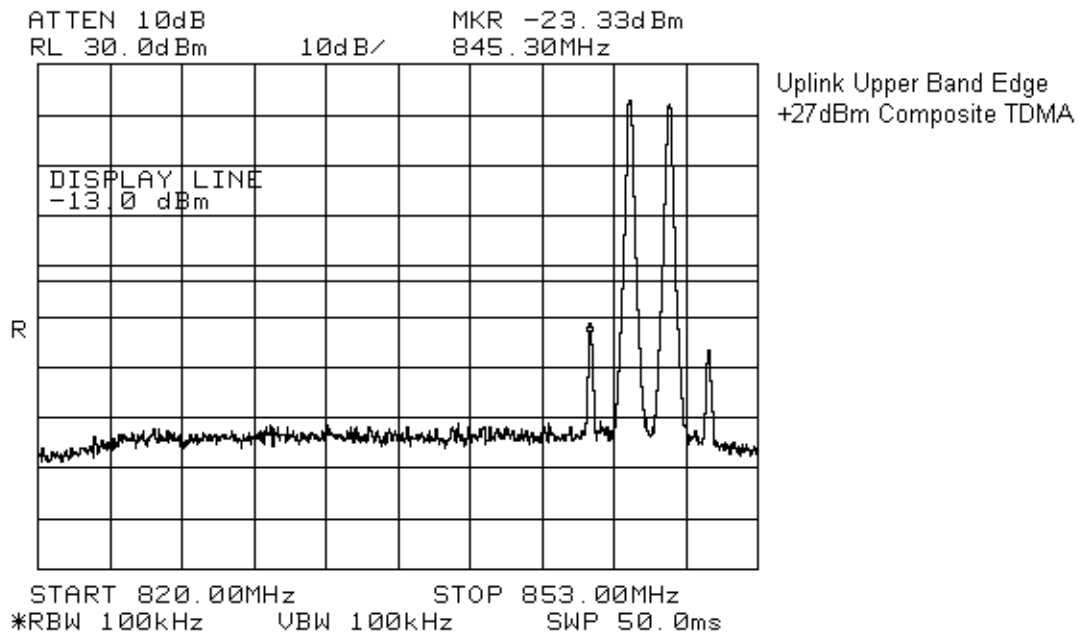


Uplink Lower Band Edge  
+27dBm Composite TDMA

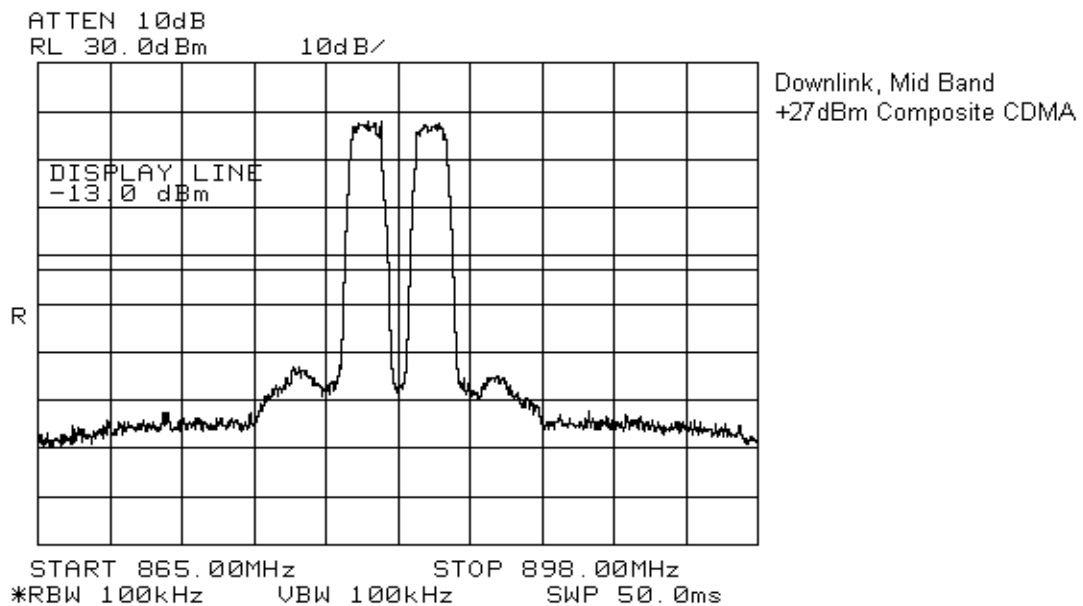
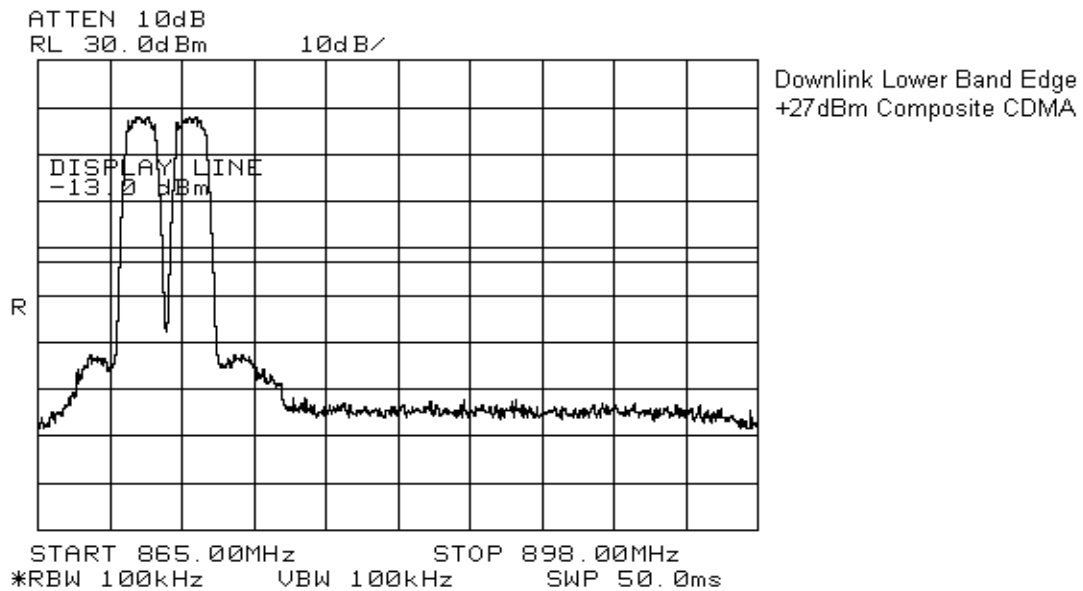


Uplink Mid Band  
+27dBm Composite TDMA

EQUIPMENT: MW-CBDA-800AB-1W60-PG2

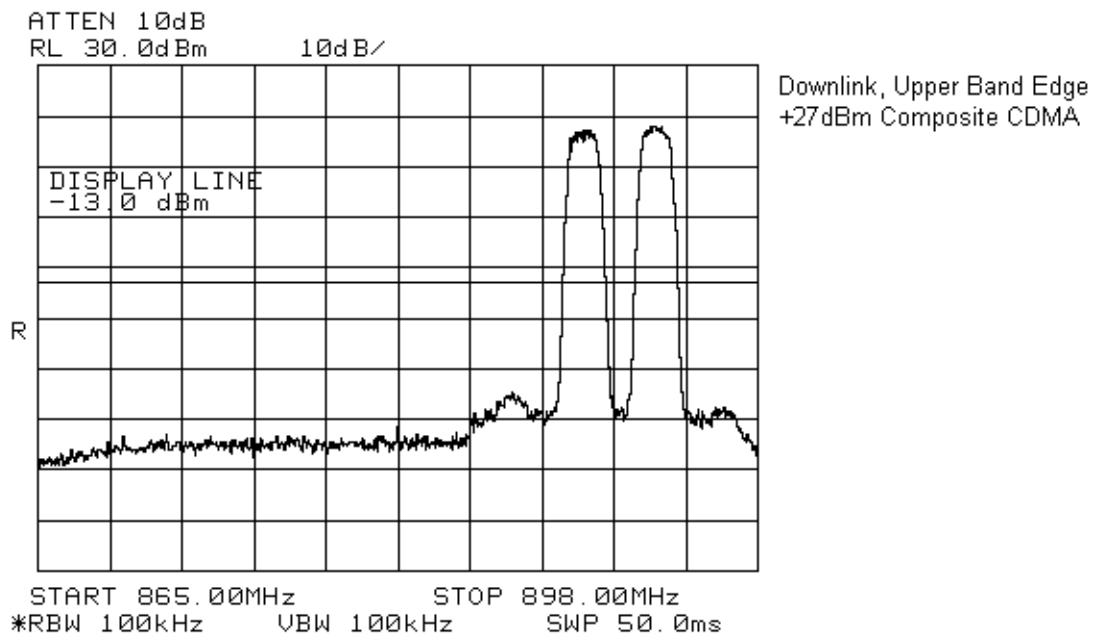


EQUIPMENT: MW-CBDA-800AB-1W60-PG2

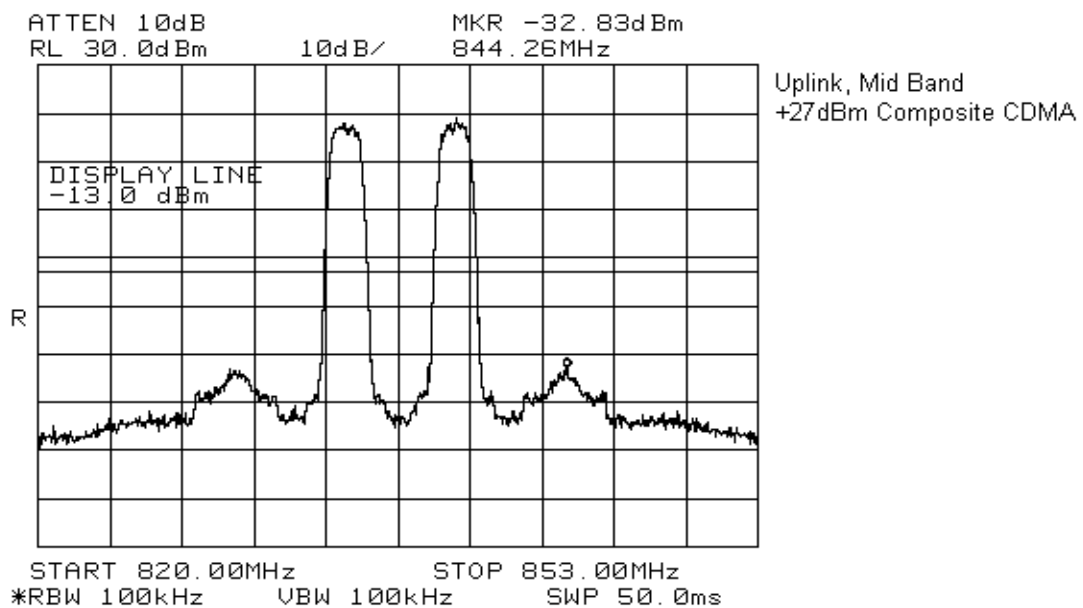
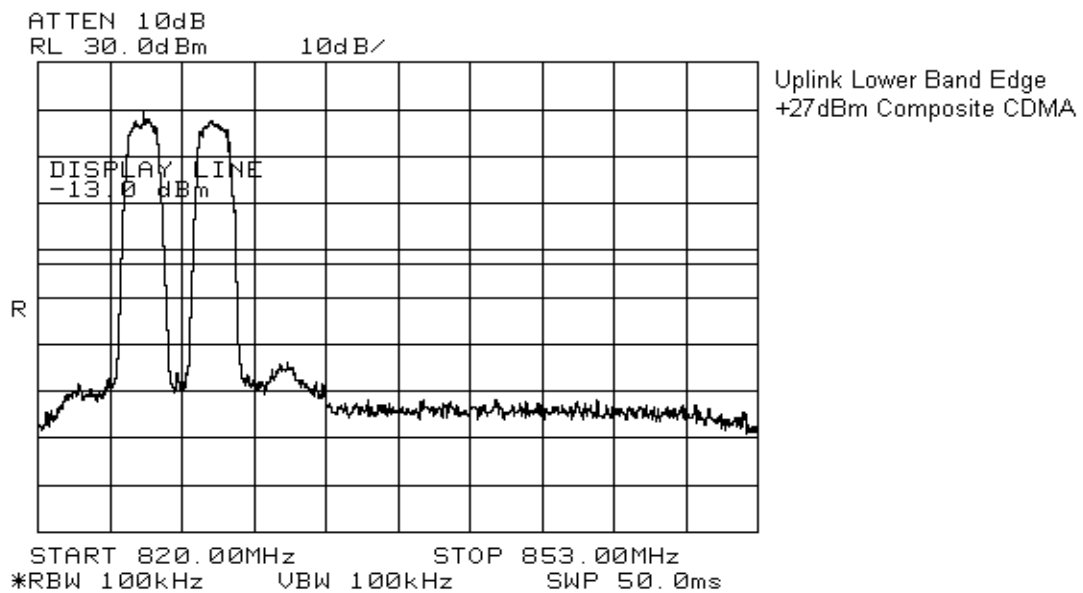


EQUIPMENT: MW-CBDA-800AB-1W60-PG2

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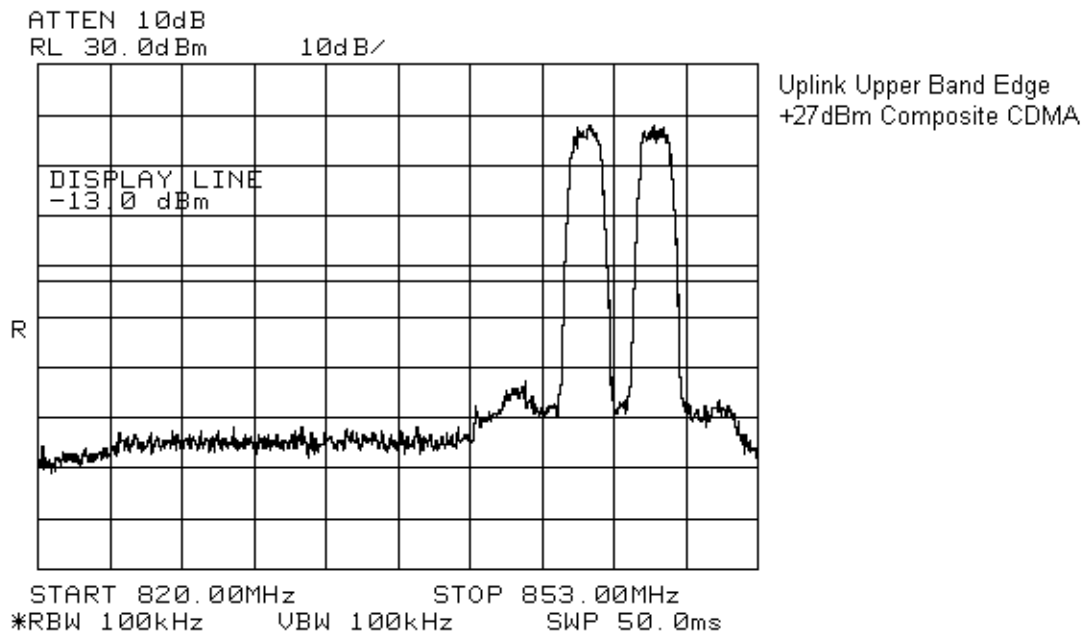


EQUIPMENT: MW-CBDA-800AB-1W60-PG2



EQUIPMENT: MW-CBDA-800AB-1W60-PG2

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*EQUIPMENT:* MW-CBDA-800AB-1W60-PG2

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## **Section 6.        Field Strength of Spurious Emissions**

**Para. No.: 2.1053**

<b>Test Performed By: Glen Westwell</b>	<b>Date of Test: 29 Oct 2003</b>
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**Minimum Standard:**        22.917(e): -13dBm

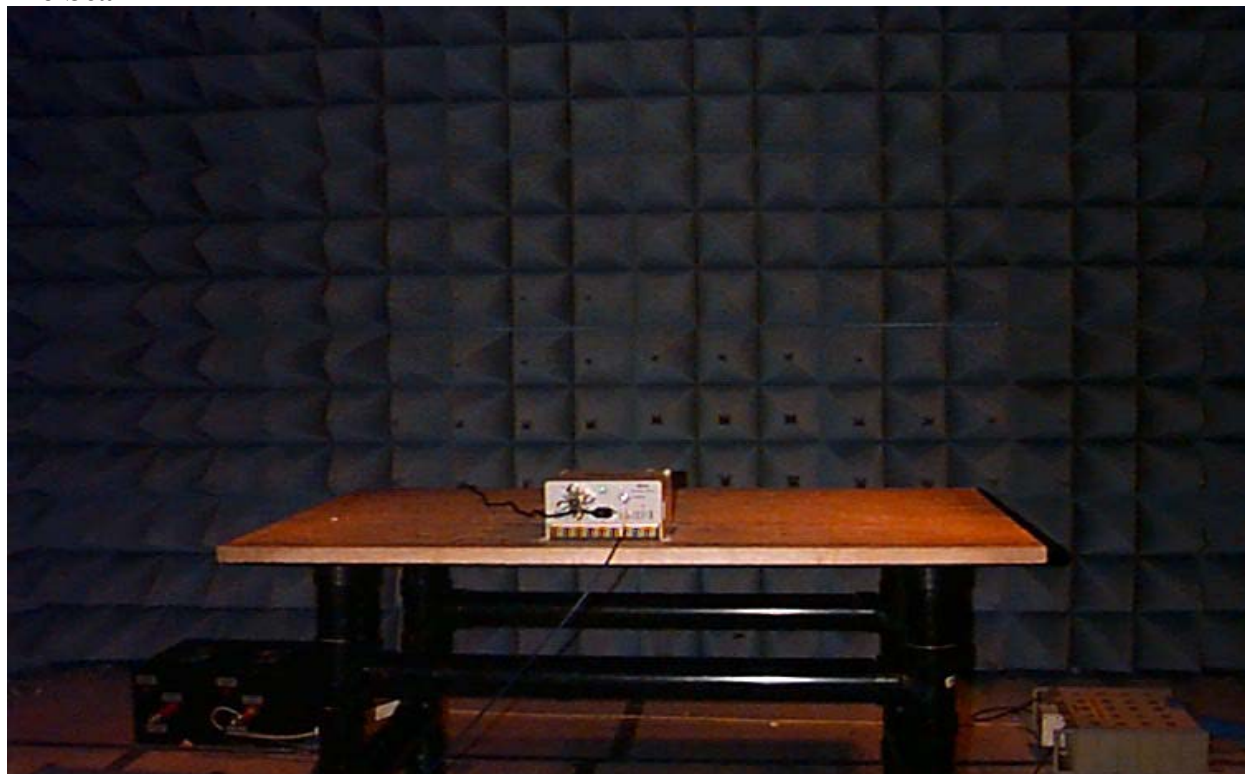
**Test Results:**                Complied.  
                                      No emissions detected.

**Measurement Data:**        All emissions were searched to the 10<sup>th</sup> harmonic.

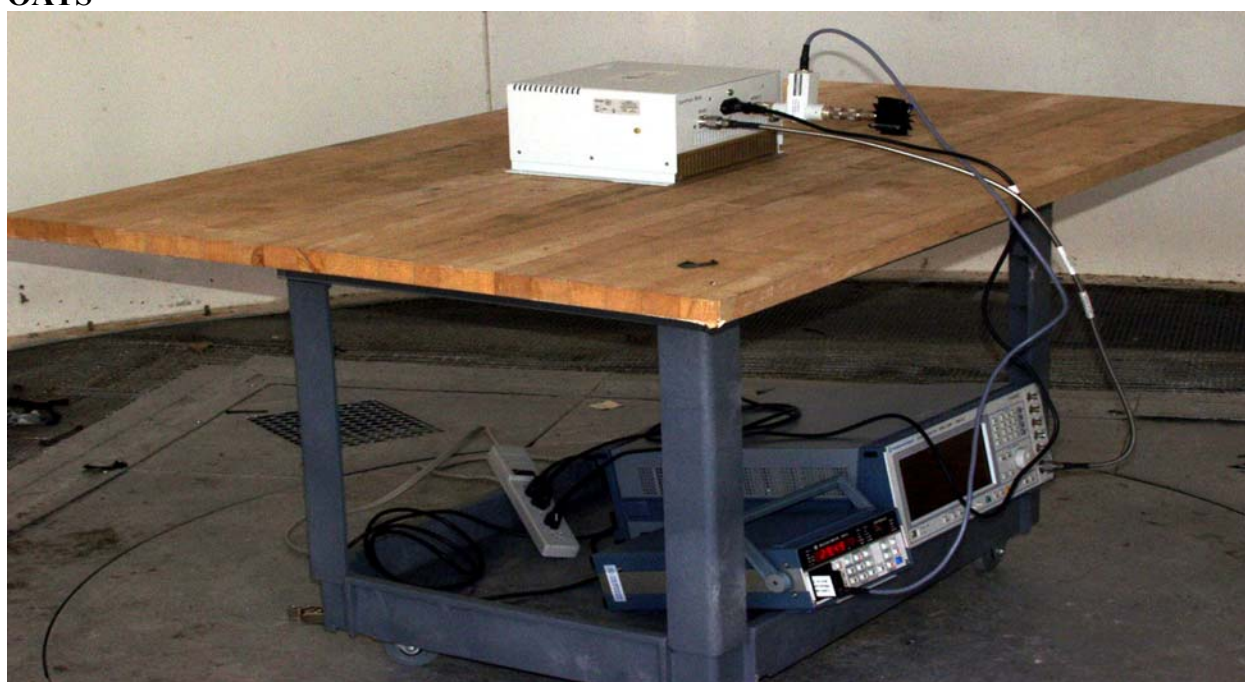
*EQUIPMENT:* MW-CBDA-800AB-1W60-PG2

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**Photographs of Test Setup**  
**Pre-Scan**



**OATS**





*EQUIPMENT:* MW-CBDA-800AB-1W60-PG2**Section 7. Test Equipment List**

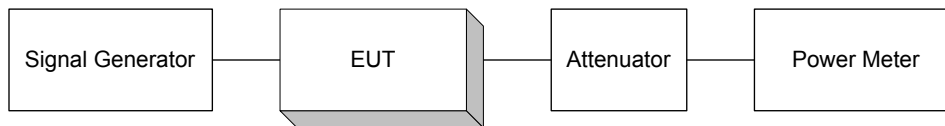
CAL CYCLE	EQUIPMENT	MANUFACTURER	MODEL	SERIAL	LAST CAL.	NEXT CAL.
1 Year	Spectrum Analyzer	Hewlett Packard	8564E	FA001367	13 May 03	13 May 04
1 Year	Signal Generator	Rhode & Schwarz	SM1Q03E	FA001269	06 Dec 02	06 Dec 03
1 Year	Signal Generator	Rohde & Schwarz	SM1Q03	FA001091	25 Sep 03	25 Sep 04
1 Year	RF Millivoltmeter	Rohde & Schwarz	URV5	FA000420	20 May 03	20 May 04
1 Year	Insertion Unit	Rohde & Schwarz	URV5-Z4	FA000905	10 Apr 03	10 Apr 04
1 Year	Power Sensor	Hewlett Packard	8487A	FA001741	28 Mar 03	28 Mar 04
1 Year	Power Meter	Hewlett Packard	E4418B	FA001413	08 May 03	08 May 04
1 Year	RF AMP	JCA	4-8 GHz	FA001497	18 June 03	18 June 04
1 Year	RF AMP	JCA	2-4 GHz	FA001496	18 June 03	18 June 04
1 Year	RF AMP	JCA	1-2 GHz	FA001498	18 June 03	18 June 04
1 Year	Spectrum Analyzer	Hewlett-Packard	8566B	FA001309	June. 05/03	June. 05/04
1 Year	Spectrum Analyzer Display	Hewlett-Packard	85662A	FA001309	June. 05/03	June. 05/04
NCR	Bilog	Schaffner	CBL6112B	FA001504	NCR	NCR
1 Year	Horn Antenna #2	EMCO	3115	FA000825	Dec. 09/02	Dec. 09/03

*EQUIPMENT:* MW-CBDA-800AB-1W60-PG2

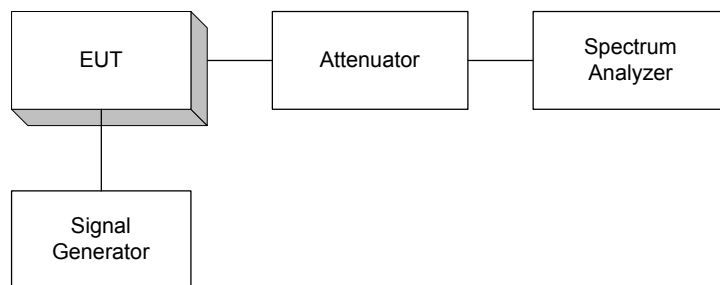
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## Section 8. Block Diagrams

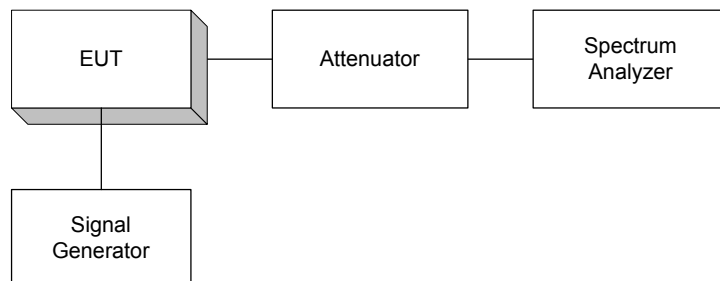
### Para. No. 2.1046 - R.F. Power Output



### Para. No. 2.1049 - Occupied Bandwidth

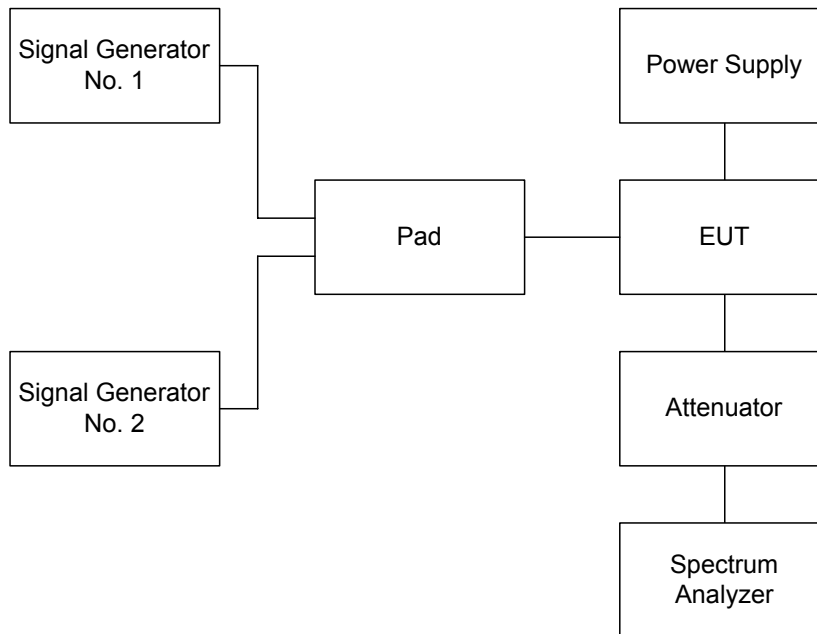


### Para. No. 2.1051 - Spurious Emissions at Antenna Terminals



*EQUIPMENT:* MW-CBDA-800AB-1W60-PG2

### Para. No. 2.1051 - Spurious Emissions at Antenna Terminals



### Para. No. 2.1053 - Field Strength of Spurious Radiation

#### TIA/EIA 603

Effective Radiated Power

Spurious Emissions

