

Test Report:	1W04204
Applicant:	Elisra Electronic Systems Ltd. 48 Mivtza Kadesh Street 51203, Bene-Beraq Israel
Equipment Under Test: (EUT)	MW-CBDA-ESMR-10W80A MW-CBDA-ESMR-1W80A
FCC ID:	OIWCBD AESMR10W80 OIWCBD AESMR1W80
In Accordance With:	FCC Part 90
Tested By:	Nemko Canada Inc. 3325 River Road, R.R. 5 Ottawa, Ontario K1V 1H2
Authorized By:	 R. Grant, Wireless Group Manager
Date:	
Total Number of Pages:	49

Table of Contents

Section 1.	Summary of Test Results.....	3
Section 2.	General Equipment Specification	5
Section 3.	Occupied Bandwidth.....	6
Section 4.	Spurious Emissions at Antenna Terminals.....	31
Section 5.	Field Strength of Spurious Emissions	48
Section 6.	Test Equipment List	49
Annex A	Test Diagrams	A1

*EQUIPMENT: MW-CBDA-ESMR-10W80A & MW-CBDA-ESMR-1W80A**FCC ID: OIWCBD AESMR10W80 & OIWCBD AESMR1W80A*

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 90.

☐

New Submission

☐

Production Unit

☒

Class II Permissive Change

☐

Pre-Production Unit

A	M	P
---	---	---

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".



NVLAP LAB CODE: 100351-0

TESTED BY: _____ DATE: _____
Glen Westwell, Wireless Technologist

Nemko Canada Inc. authorizes the above named company to reproduce this report provided it is reproduced in its entirety and for use by the company's employees only.

Any use which a third party makes of this report, or any reliance on or decisions to be made based on it, are the responsibility of such third parties. Nemko Canada Inc. accepts no responsibility for damages, if any, suffered by any third party as a result of decisions made or actions based on this report.

This report applies only to the items tested.

*EQUIPMENT: MW-CBDA-ESMR-10W80A & MW-CBDA-ESMR-1W80A**FCC ID: OIWCBD AESMR10W80 & OIWCBD AESMR1W80A*

Summary Of Test Data

Name Of Test	Para. No.	Result
Occupied Bandwidth	2.1049	Complies
Spurious Emissions at Antenna Terminals	2.1051	Complies
Field Strength of Spurious Emissions	2.1053	Complies

Footnotes For N/A's:

- (1) The equipment has previously been certified under FCC ID: OIWCBD AESMR10W80 for Model: MW-CBDA-ESMR-10W80A and OIWCBD AESMR1W80 for Model: MW-CBDA-ESMR-1W80A.
- (2) These bi-directional amplifiers were previously certified with a D7W emission.
- (3) This Class II Permissive change report contains supporting data to allow for the addition of the following emission designators for both model amplifiers: F1D, F1E and F3E.
- (4) Worst case emissions were found to be with AGC "OFF". Therefore AGC "OFF" plots were submitted.

.

EQUIPMENT: MW-CBDA-ESMR-10W80A & MW-CBDA-ESMR-1W80A

FCC ID: OIWCBD AESMR10W80 & OIWCBD AESMR1W80A

Section 2. General Equipment Specification

Manufacturer: Elisra Electronic Systems Ltd.

Model No.: (1) MW-CBDA-ESMR-10W80A
(2) MW-CBDA-ESMR-1W80A

Serial No.: (1) 01041090
(2) 01041039

Transmitter

Uplink: (1) 806-821MHz, 24dBm
(2) 806-821MHz, 24dBm

Downlink: (1) 851-866MHz, 30dBm
(2) 851-866MHz, 24dBm

Emission: F1D
F1E
F3E

EQUIPMENT: MW-CBDA-ESMR-10W80A & MW-CBDA-ESMR-1W80A

FCC ID: OIWCBD AESMR10W80 & OIWCBD AESMR1W80A

Section 3. Occupied Bandwidth

Para. No.: 2.1049

Test Performed By: Glen Westwell

Date of Test: August 30, 2001

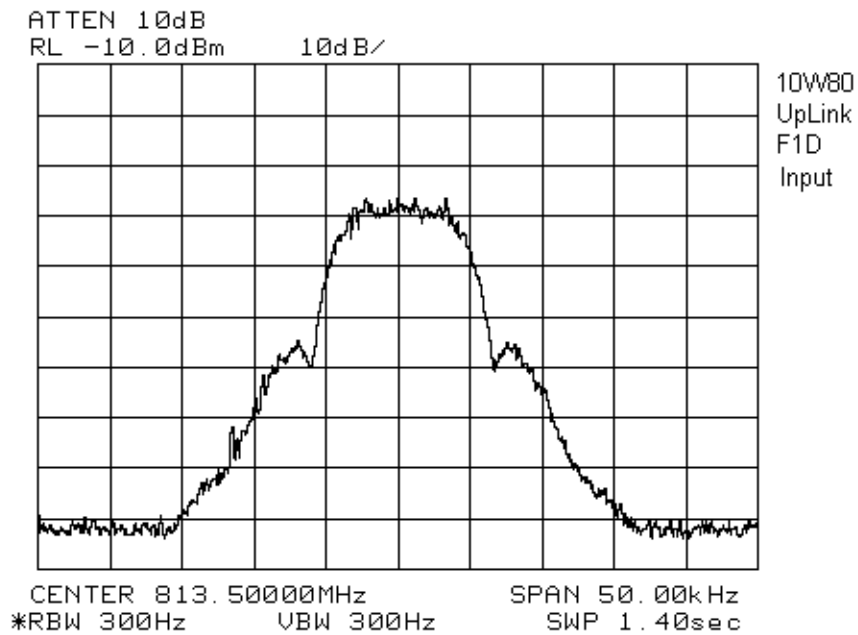
Test Results: Complies.

Measurement Data: See attached graphs.

The modulated input/output signals were compared in order to ensure that there is no degradation in the occupied bandwidth.

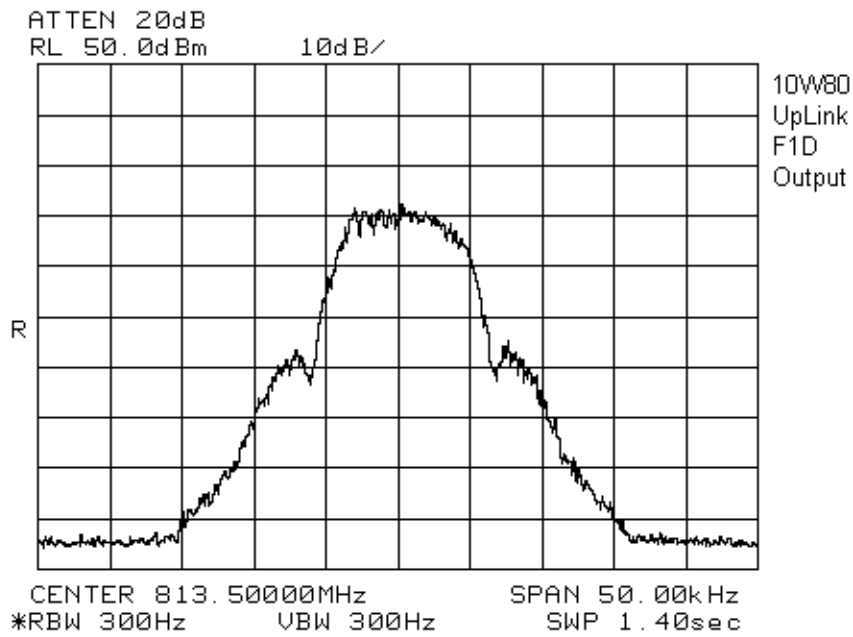
EQUIPMENT: MW-CBDA-ESMR-10W80A & MW-CBDA-ESMR-1W80A

FCC ID: OIWCBD AESMR10W80 & OIWCBD AESMR1W80A



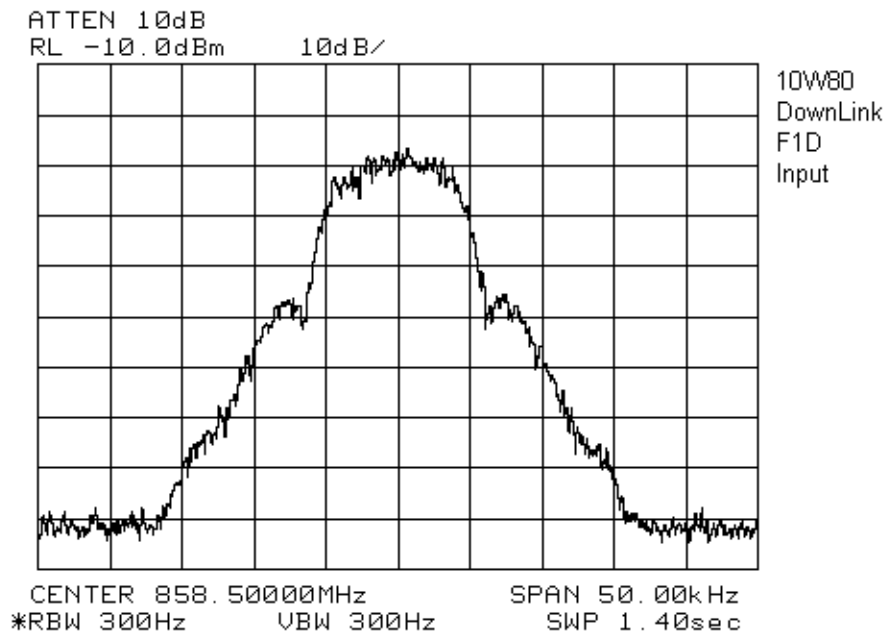
EQUIPMENT: MW-CBDA-ESMR-10W80A & MW-CBDA-ESMR-1W80A

FCC ID: OIWCBD AESMR10W80 & OIWCBD AESMR1W80A



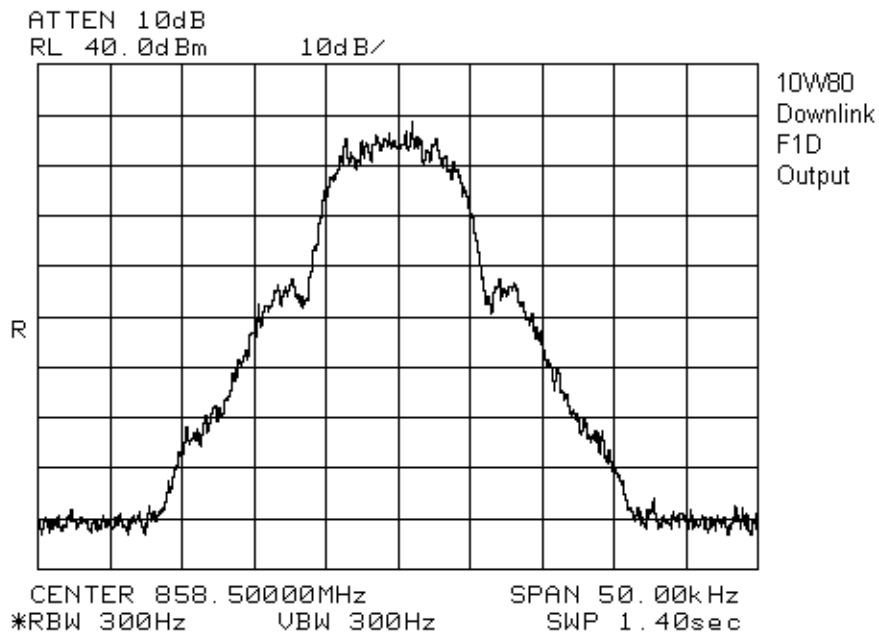
EQUIPMENT: MW-CBDA-ESMR-10W80A & MW-CBDA-ESMR-1W80A

FCC ID: OIWCBD AESMR10W80 & OIWCBD AESMR1W80A



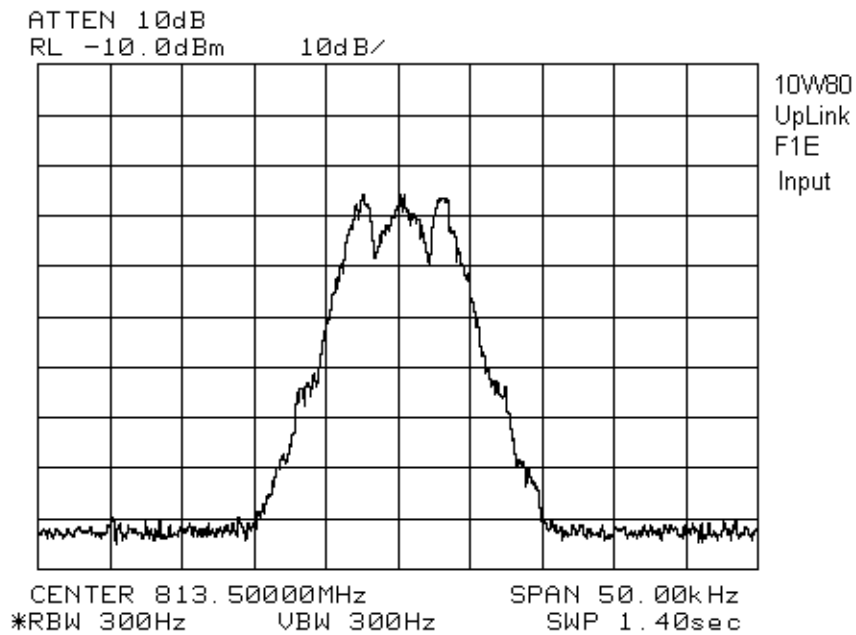
EQUIPMENT: MW-CBDA-ESMR-10W80A & MW-CBDA-ESMR-1W80A

FCC ID: OIWCBD AESMR10W80 & OIWCBD AESMR1W80A



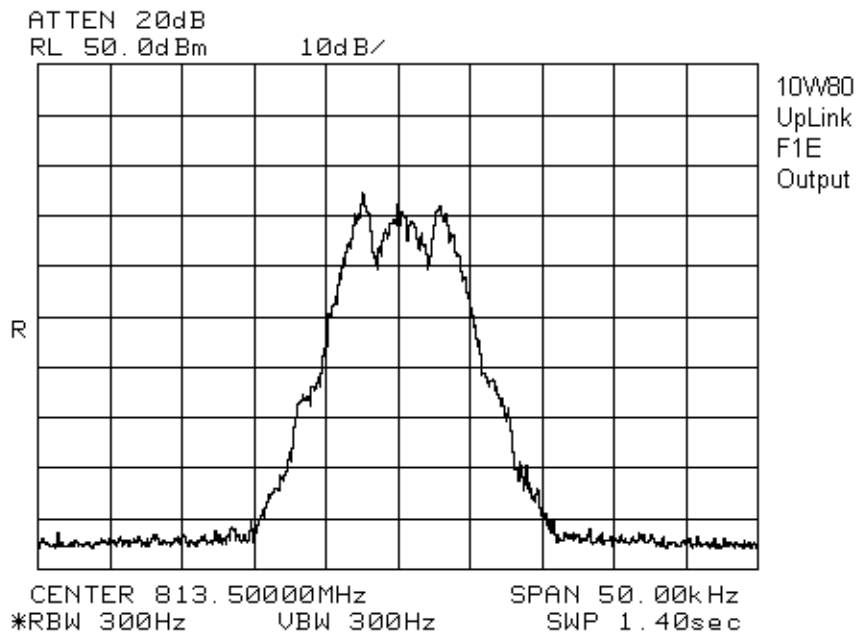
EQUIPMENT: MW-CBDA-ESMR-10W80A & MW-CBDA-ESMR-1W80A

FCC ID: OIWCBD AESMR10W80 & OIWCBD AESMR1W80A



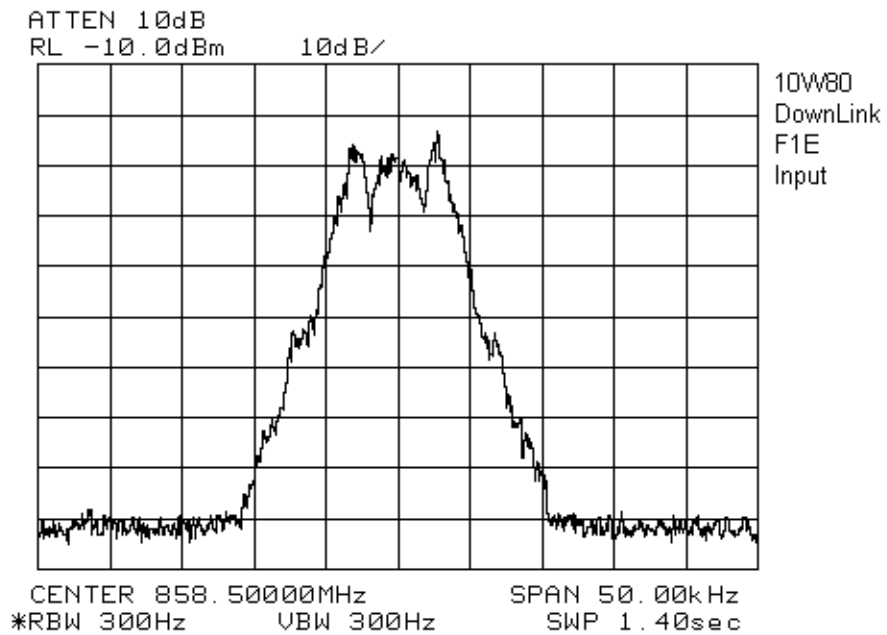
EQUIPMENT: MW-CBDA-ESMR-10W80A & MW-CBDA-ESMR-1W80A

FCC ID: OIWCBDAESMR10W80 & OIWCBDAESMR1W80A



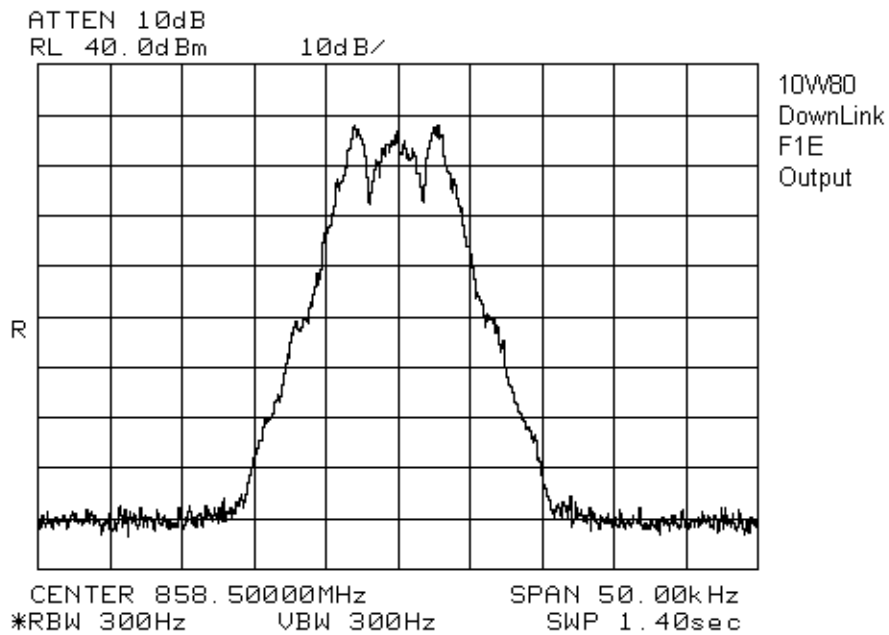
EQUIPMENT: MW-CBDA-ESMR-10W80A & MW-CBDA-ESMR-1W80A

FCC ID: OIWCBD AESMR10W80 & OIWCBD AESMR1W80A



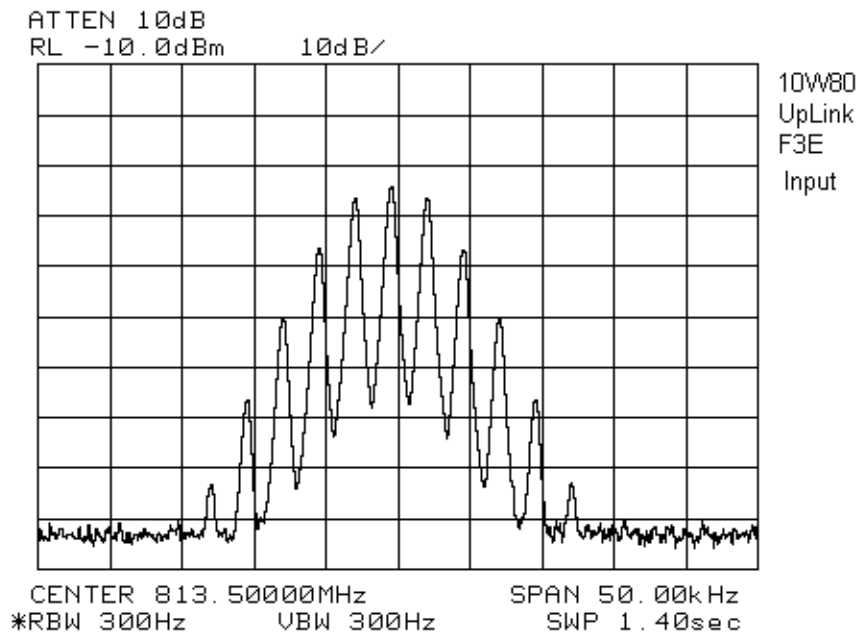
EQUIPMENT: MW-CBDA-ESMR-10W80A & MW-CBDA-ESMR-1W80A

FCC ID: OIWCBD AESMR10W80 & OIWCBD AESMR1W80A



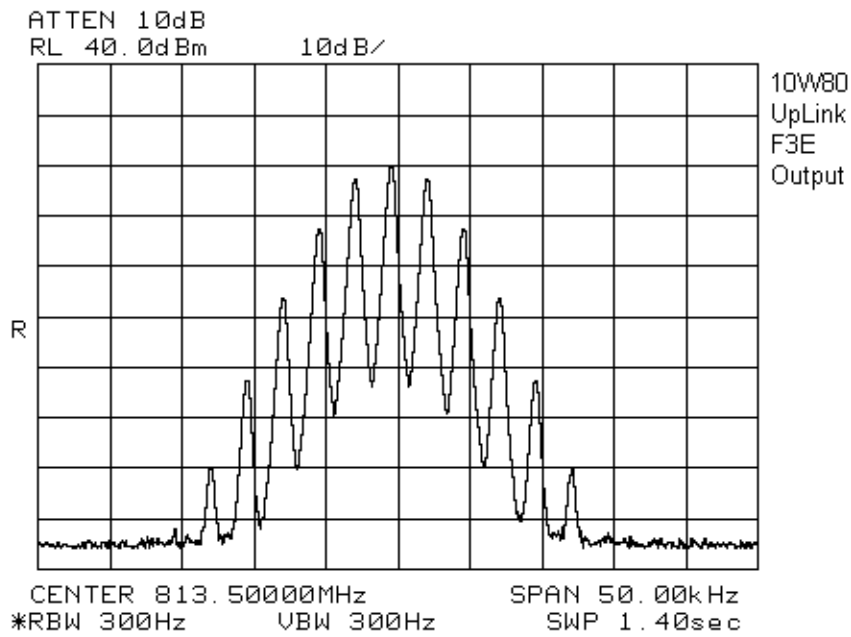
EQUIPMENT: MW-CBDA-ESMR-10W80A & MW-CBDA-ESMR-1W80A

FCC ID: OIWCBD AESMR10W80 & OIWCBD AESMR1W80A



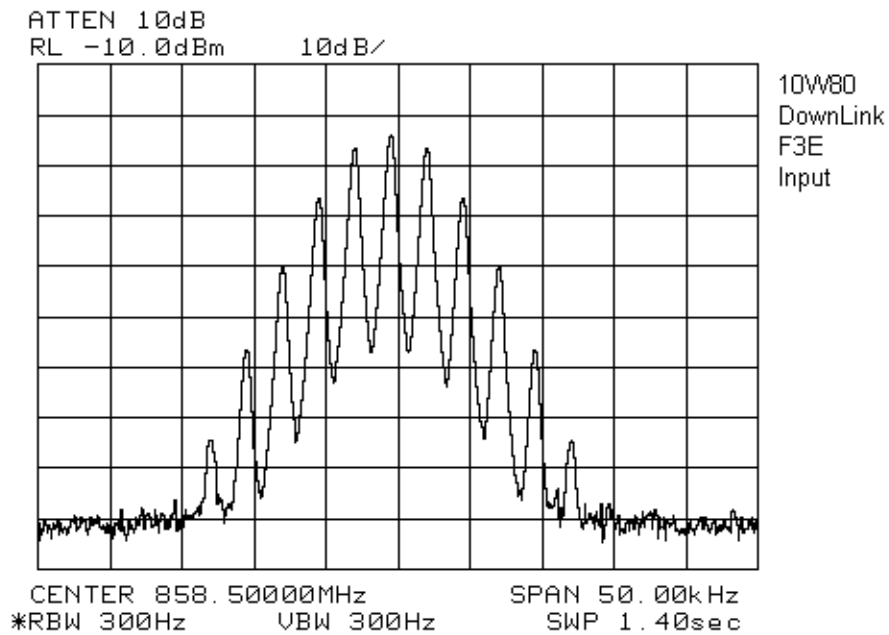
EQUIPMENT: MW-CBDA-ESMR-10W80A & MW-CBDA-ESMR-1W80A

FCC ID: OIWCBD AESMR10W80 & OIWCBD AESMR1W80A



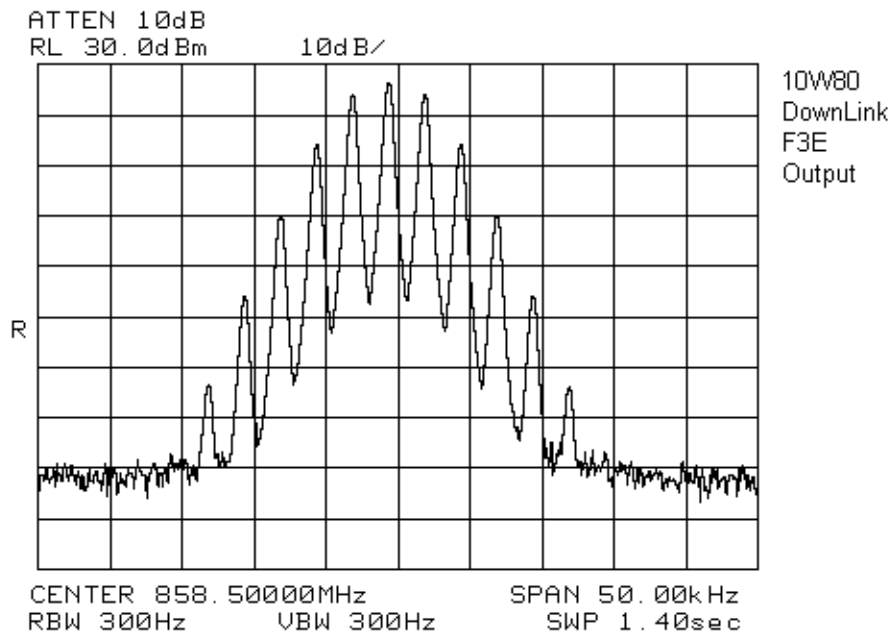
EQUIPMENT: MW-CBDA-ESMR-10W80A & MW-CBDA-ESMR-1W80A

FCC ID: OIWCBDAESMR10W80 & OIWCBDAESMR1W80A



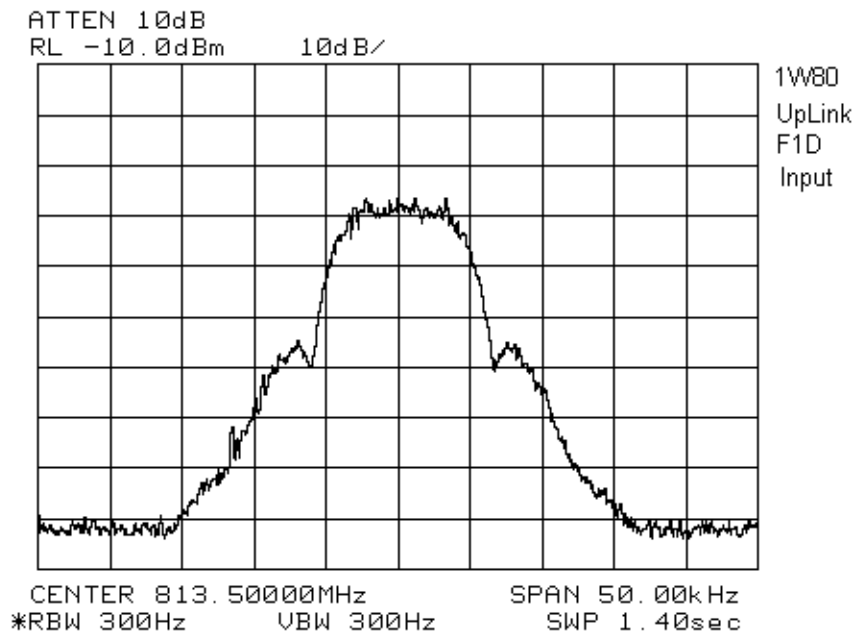
EQUIPMENT: MW-CBDA-ESMR-10W80A & MW-CBDA-ESMR-1W80A

FCC ID: OIWCBD AESMR10W80 & OIWCBD AESMR1W80A



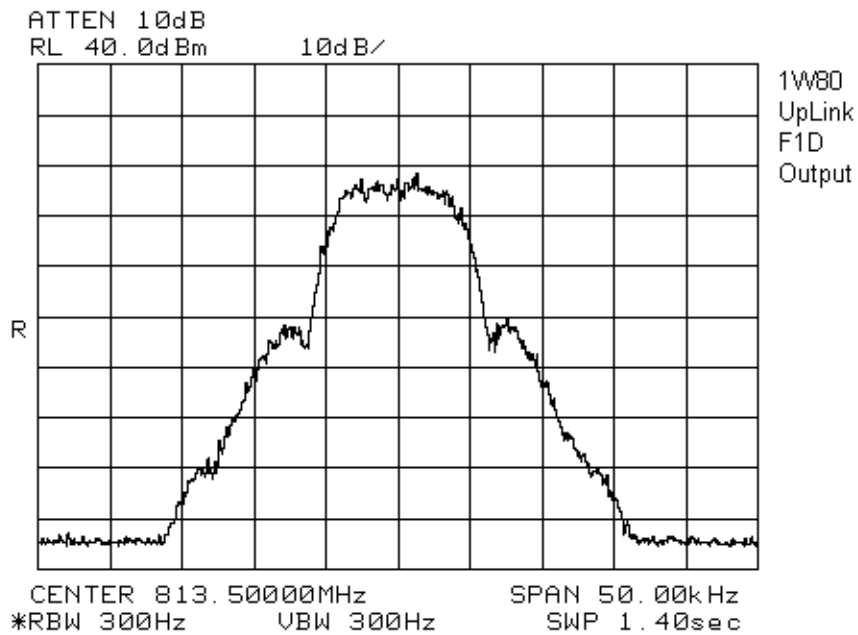
EQUIPMENT: MW-CBDA-ESMR-10W80A & MW-CBDA-ESMR-1W80A

FCC ID: OIWCBD AESMR10W80 & OIWCBD AESMR1W80A



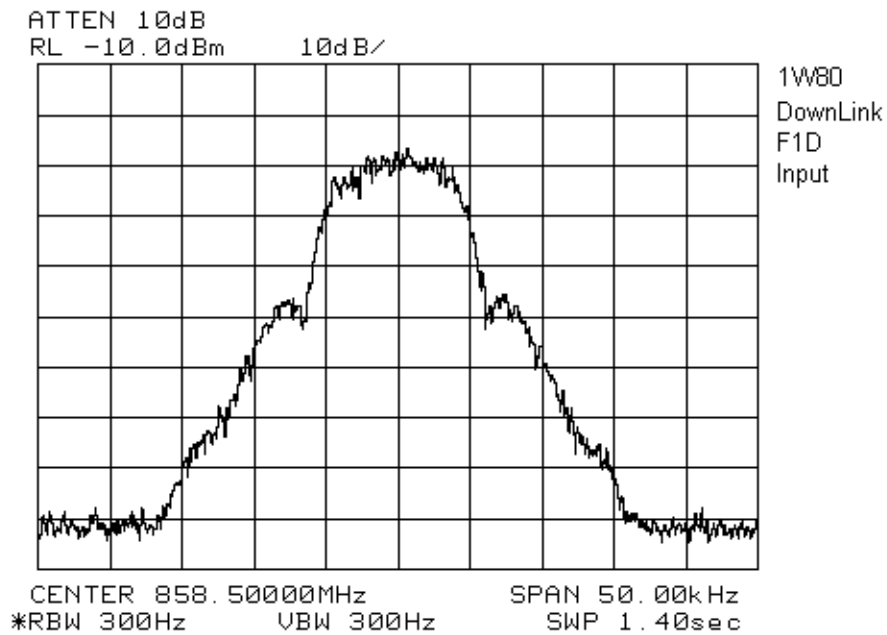
EQUIPMENT: MW-CBDA-ESMR-10W80A & MW-CBDA-ESMR-1W80A

FCC ID: OIWCBD AESMR10W80 & OIWCBD AESMR1W80A



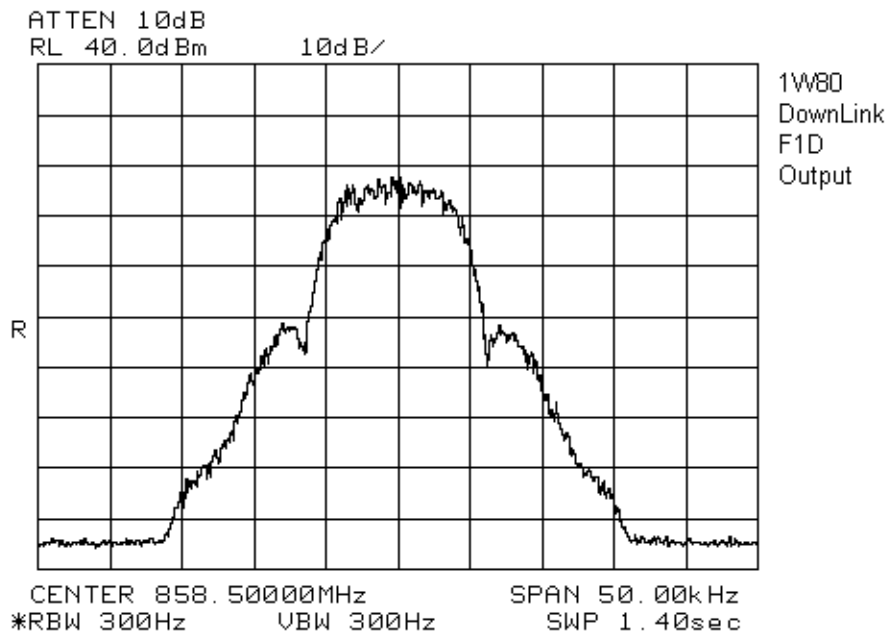
EQUIPMENT: MW-CBDA-ESMR-10W80A & MW-CBDA-ESMR-1W80A

FCC ID: OIWCBD AESMR10W80 & OIWCBD AESMR1W80A



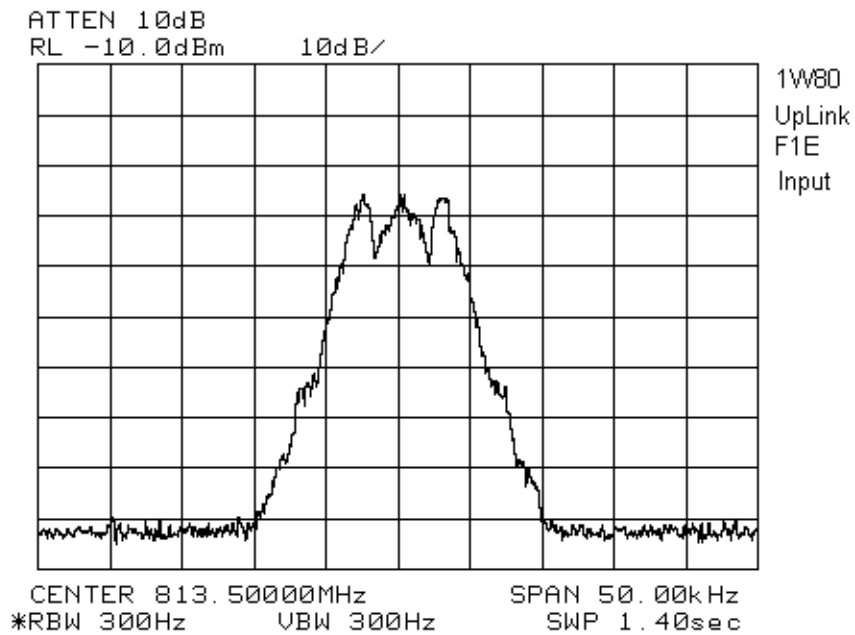
EQUIPMENT: MW-CBDA-ESMR-10W80A & MW-CBDA-ESMR-1W80A

FCC ID: OIWCBD AESMR10W80 & OIWCBD AESMR1W80A



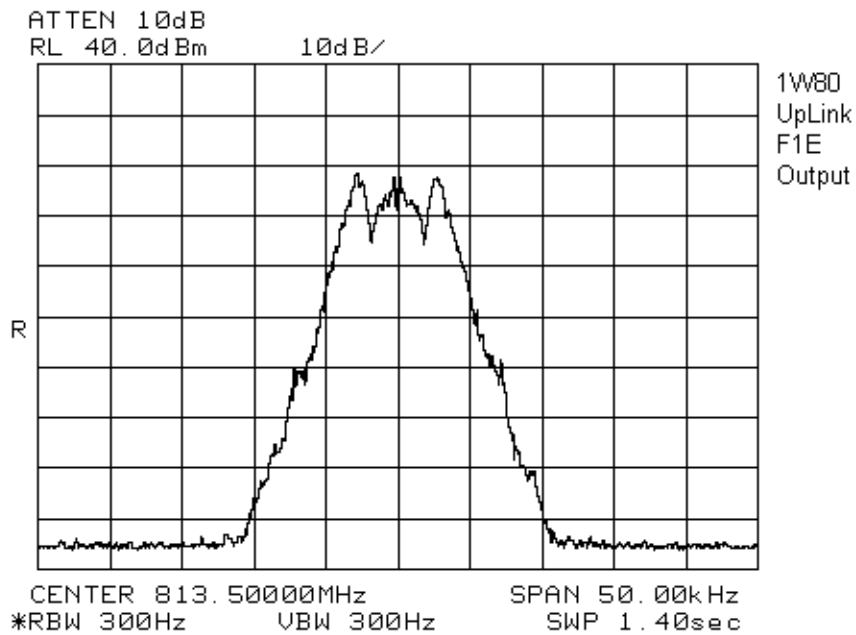
EQUIPMENT: MW-CBDA-ESMR-10W80A & MW-CBDA-ESMR-1W80A

FCC ID: OIWCBD AESMR10W80 & OIWCBD AESMR1W80A



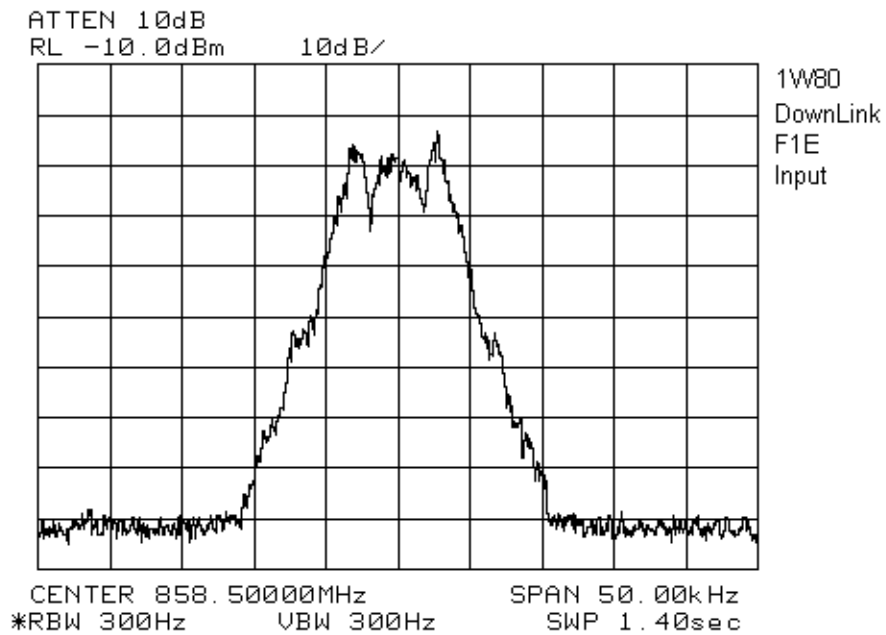
EQUIPMENT: MW-CBDA-ESMR-10W80A & MW-CBDA-ESMR-1W80A

FCC ID: OIWCBD AESMR10W80 & OIWCBD AESMR1W80A



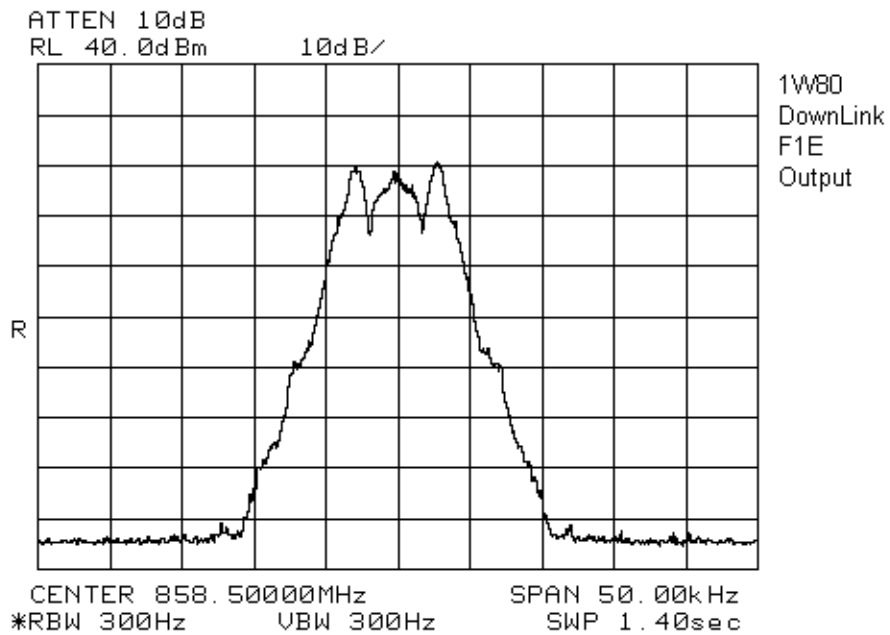
EQUIPMENT: MW-CBDA-ESMR-10W80A & MW-CBDA-ESMR-1W80A

FCC ID: OIWCBD AESMR10W80 & OIWCBD AESMR1W80A



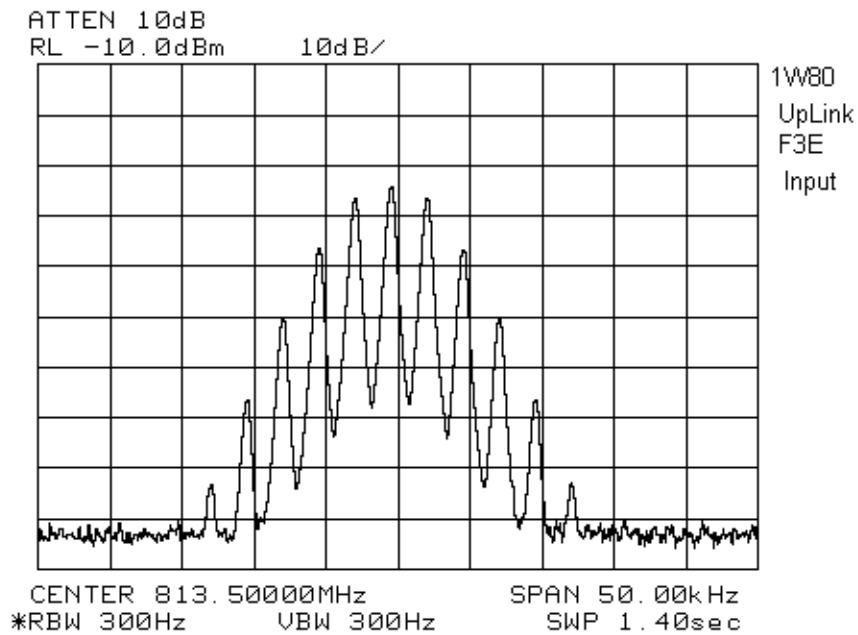
EQUIPMENT: MW-CBDA-ESMR-10W80A & MW-CBDA-ESMR-1W80A

FCC ID: OIWCBD AESMR10W80 & OIWCBD AESMR1W80A



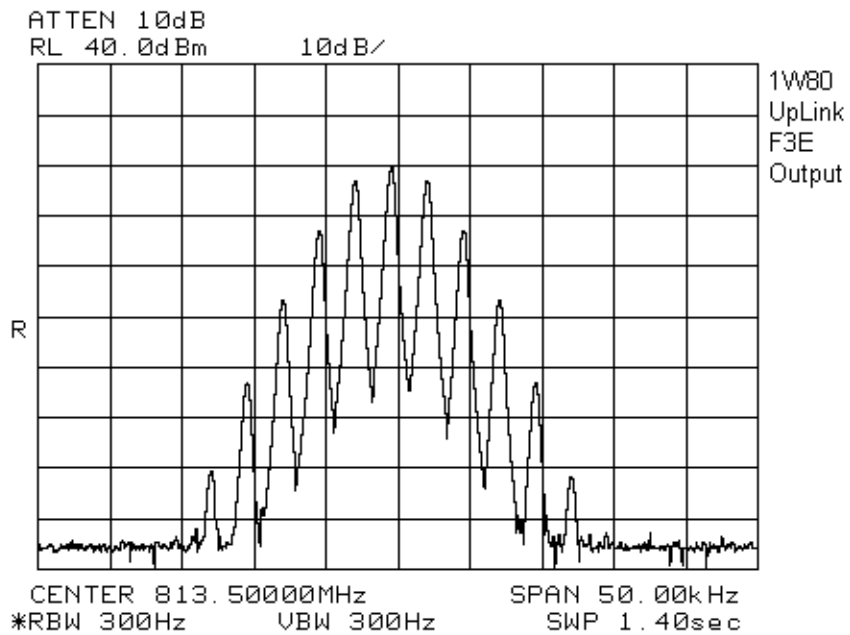
EQUIPMENT: MW-CBDA-ESMR-10W80A & MW-CBDA-ESMR-1W80A

FCC ID: OIWCBD AESMR10W80 & OIWCBD AESMR1W80A



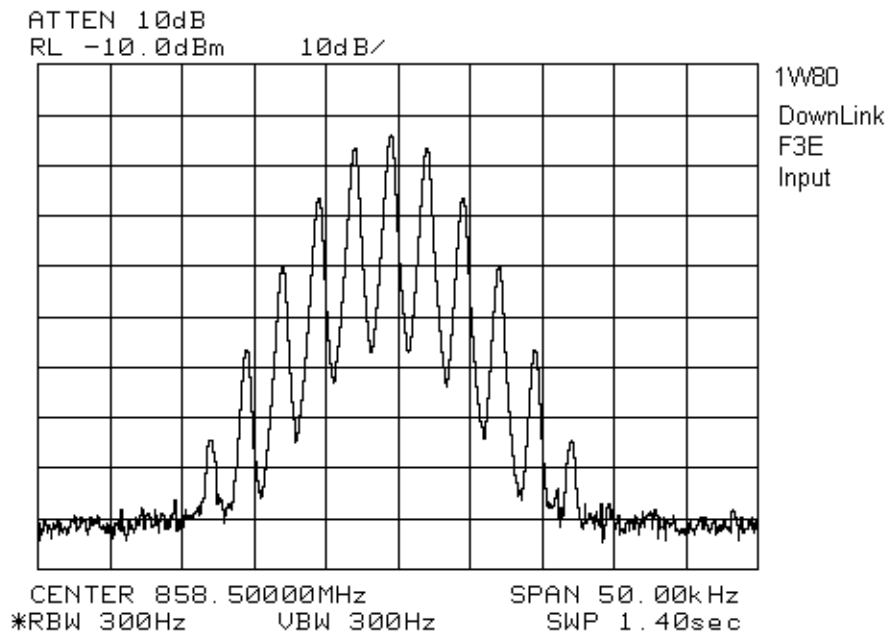
EQUIPMENT: MW-CBDA-ESMR-10W80A & MW-CBDA-ESMR-1W80A

FCC ID: OIWCBD AESMR10W80 & OIWCBD AESMR1W80A



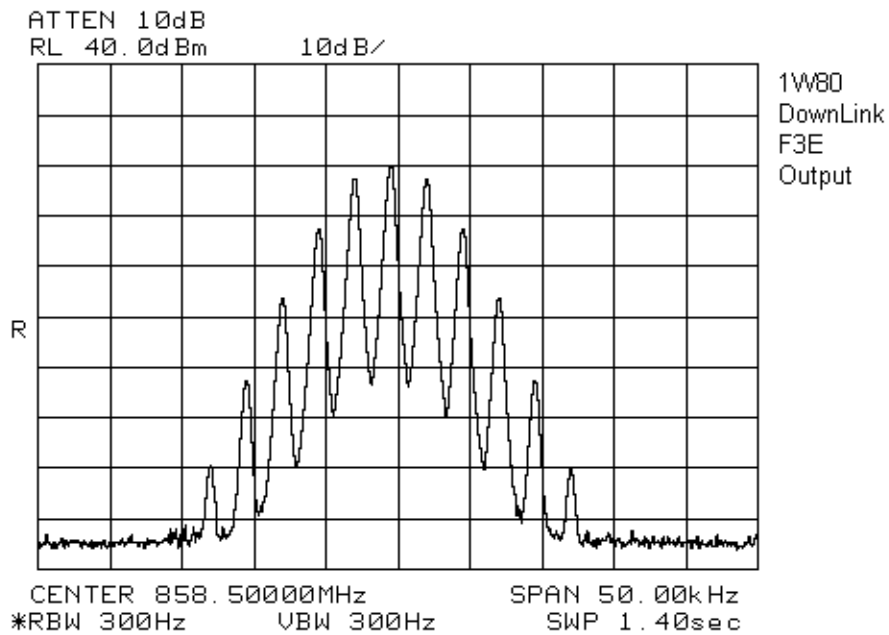
EQUIPMENT: MW-CBDA-ESMR-10W80A & MW-CBDA-ESMR-1W80A

FCC ID: OIWCBD AESMR10W80 & OIWCBD AESMR1W80A



EQUIPMENT: MW-CBDA-ESMR-10W80A & MW-CBDA-ESMR-1W80A

FCC ID: OIWCBD AESMR10W80 & OIWCBD AESMR1W80A



EQUIPMENT: MW-CBDA-ESMR-10W80A & MW-CBDA-ESMR-1W80A

FCC ID: OIWCBD AESMR10W80 & OIWCBD AESMR1W80A

Section 4. Spurious Emissions at Antenna Terminals

Para. No.: 2.1051

Test Performed By: Glen Westwell	Date of Test: August 30, 2001
---	--------------------------------------

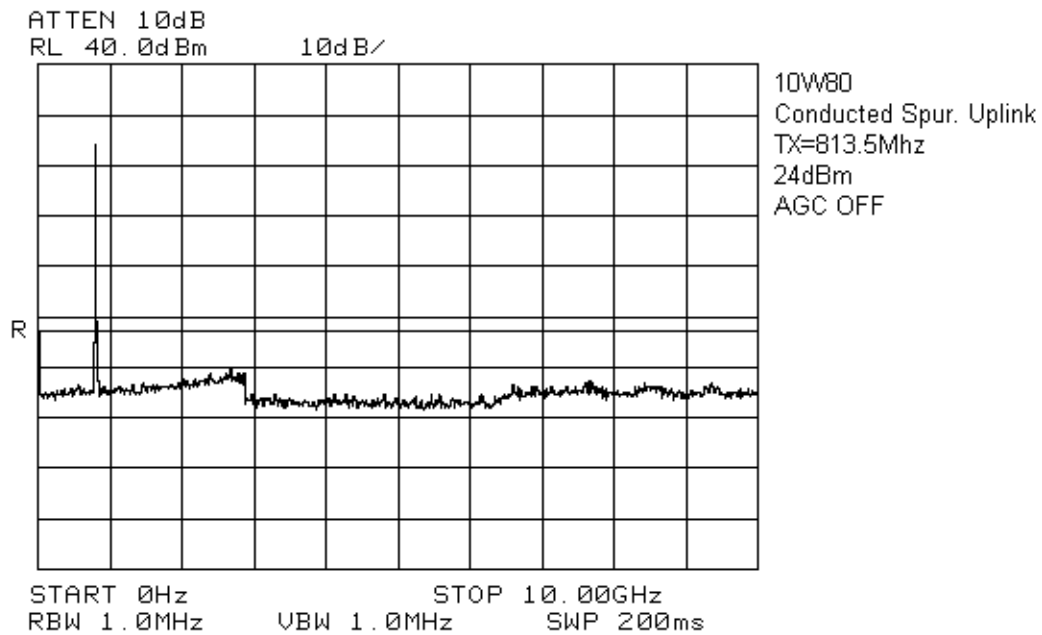
Minimum Standard: -13dBm

Test Results: Complies.

Measurement Data: See attached graphs.

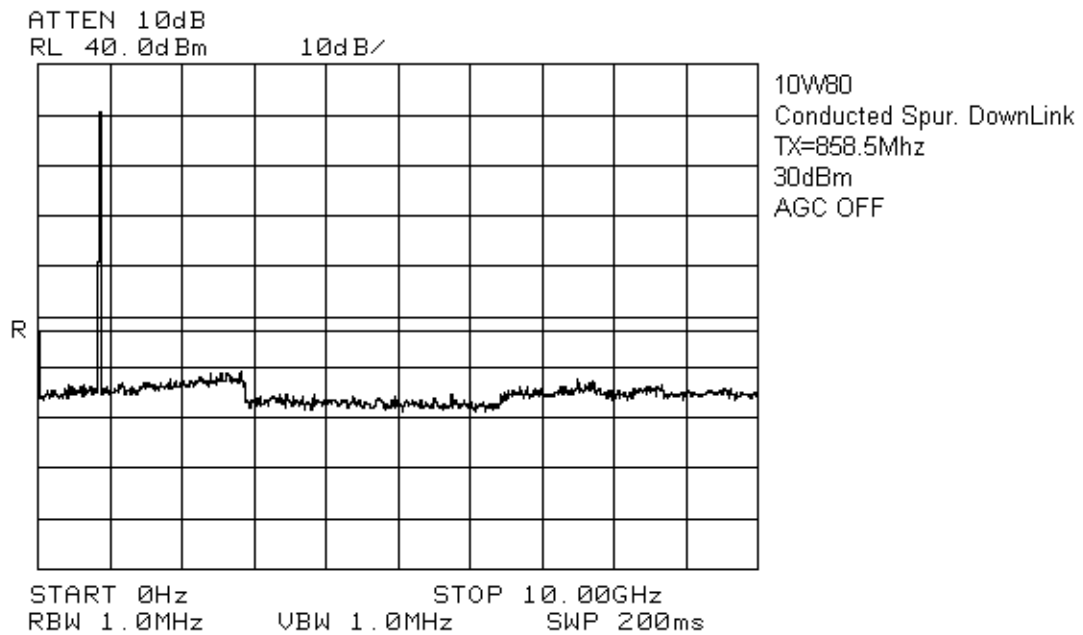
EQUIPMENT: MW-CBDA-ESMR-10W80A & MW-CBDA-ESMR-1W80A

FCC ID: OIWCBD AESMR10W80 & OIWCBD AESMR1W80A



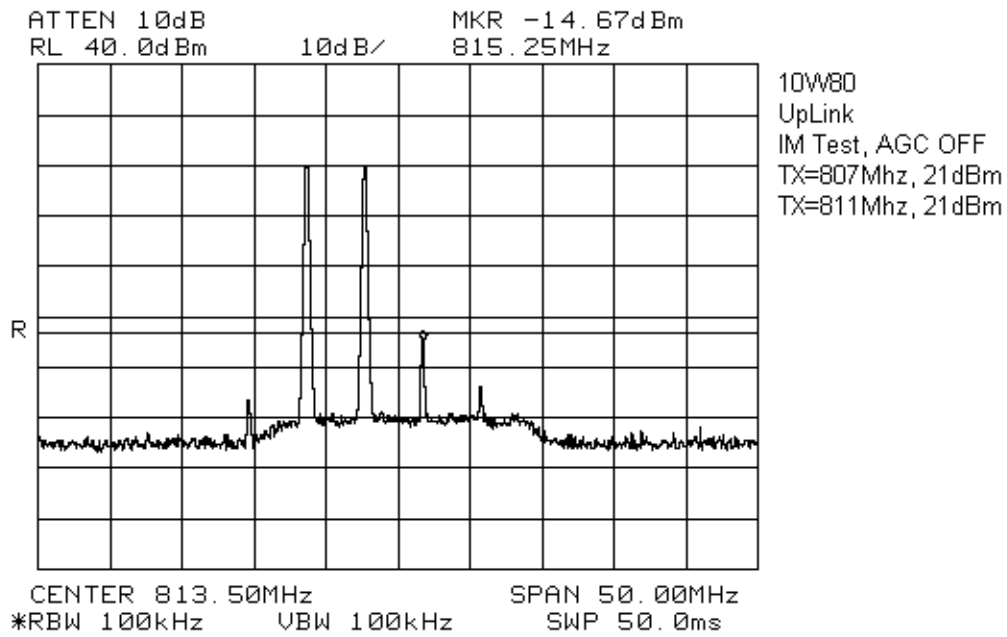
EQUIPMENT: MW-CBDA-ESMR-10W80A & MW-CBDA-ESMR-1W80A

FCC ID: OIWCBD AESMR10W80 & OIWCBD AESMR1W80A



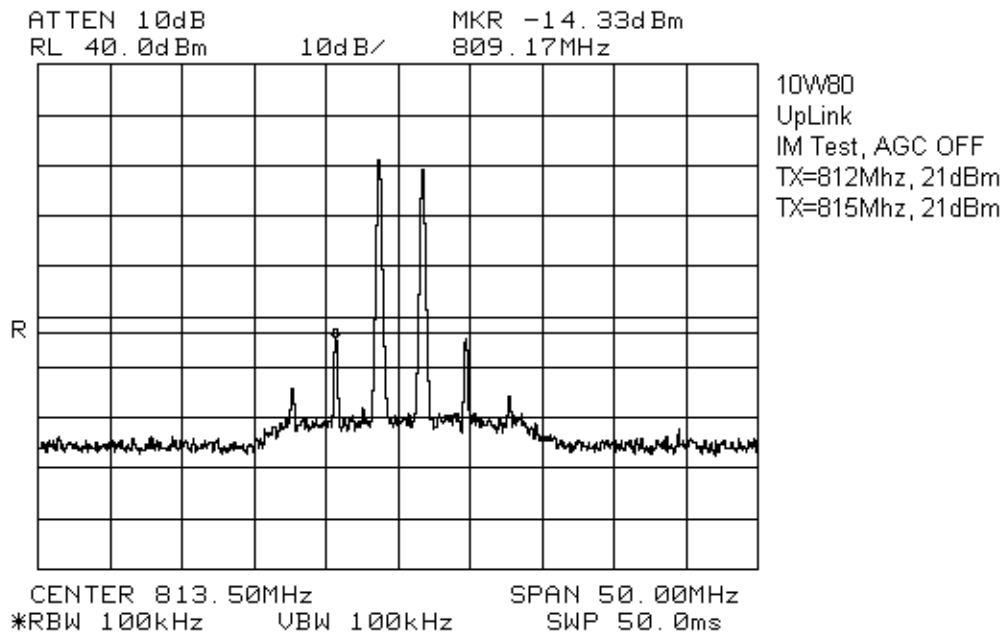
EQUIPMENT: MW-CBDA-ESMR-10W80A & MW-CBDA-ESMR-1W80A

FCC ID: OIWCBD AESMR10W80 & OIWCBD AESMR1W80A



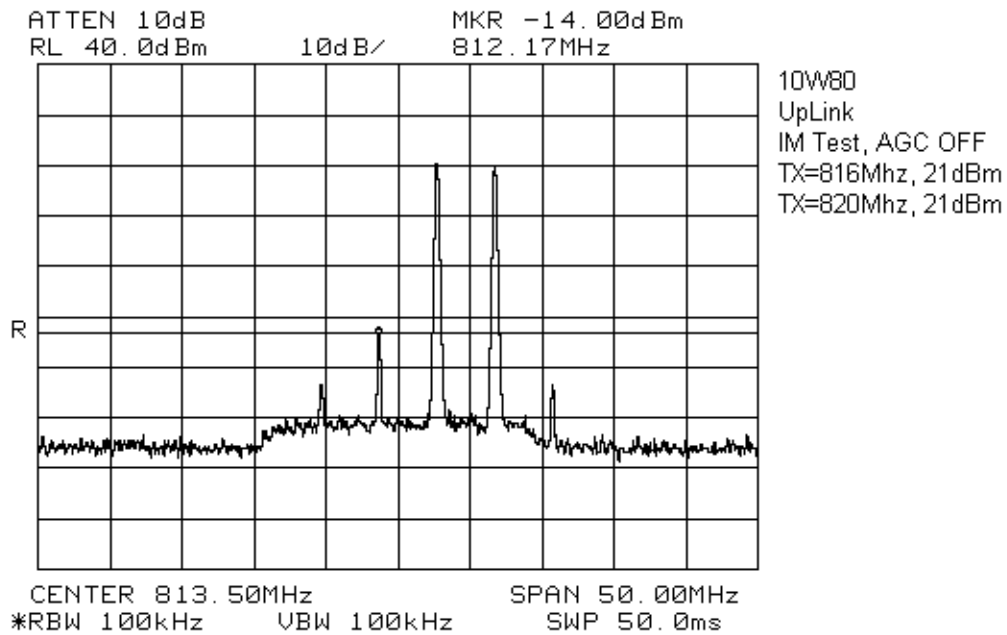
EQUIPMENT: MW-CBDA-ESMR-10W80A & MW-CBDA-ESMR-1W80A

FCC ID: OIWCBD AESMR10W80 & OIWCBD AESMR1W80A



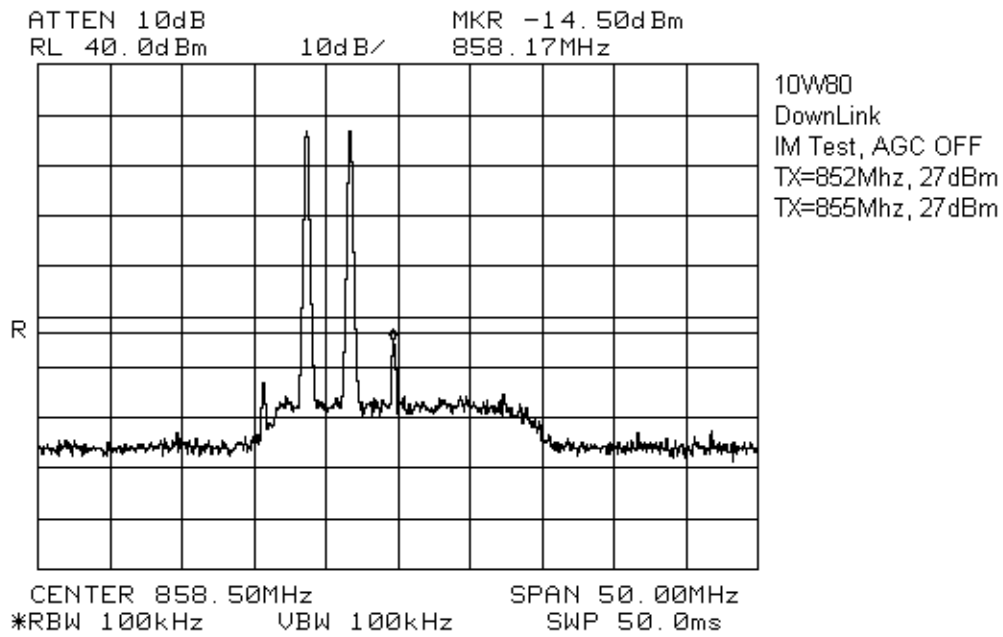
EQUIPMENT: MW-CBDA-ESMR-10W80A & MW-CBDA-ESMR-1W80A

FCC ID: OIWCBD AESMR10W80 & OIWCBD AESMR1W80A



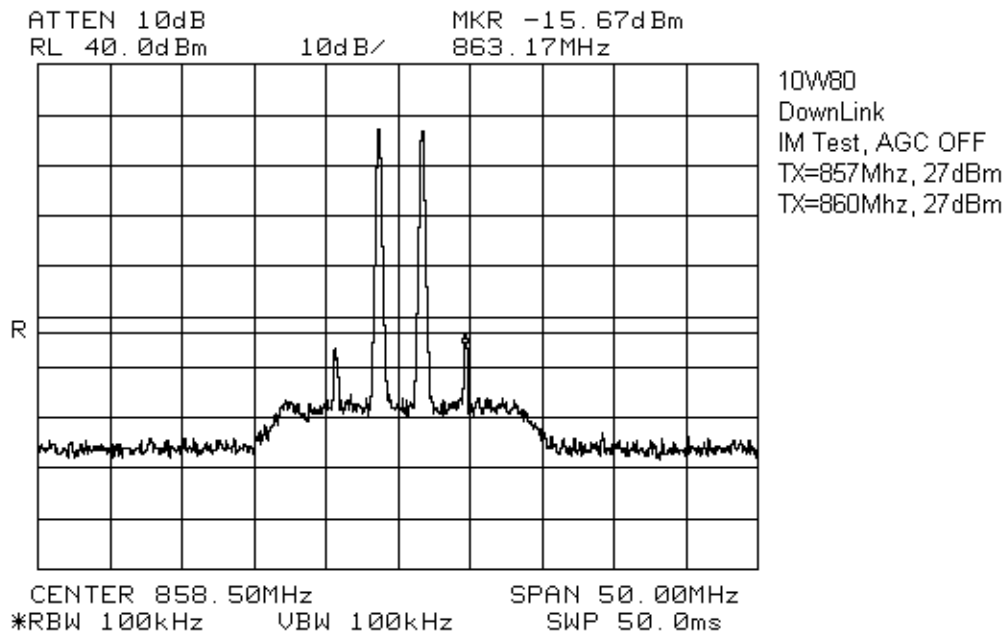
EQUIPMENT: MW-CBDA-ESMR-10W80A & MW-CBDA-ESMR-1W80A

FCC ID: OIWCBD AESMR10W80 & OIWCBD AESMR1W80A



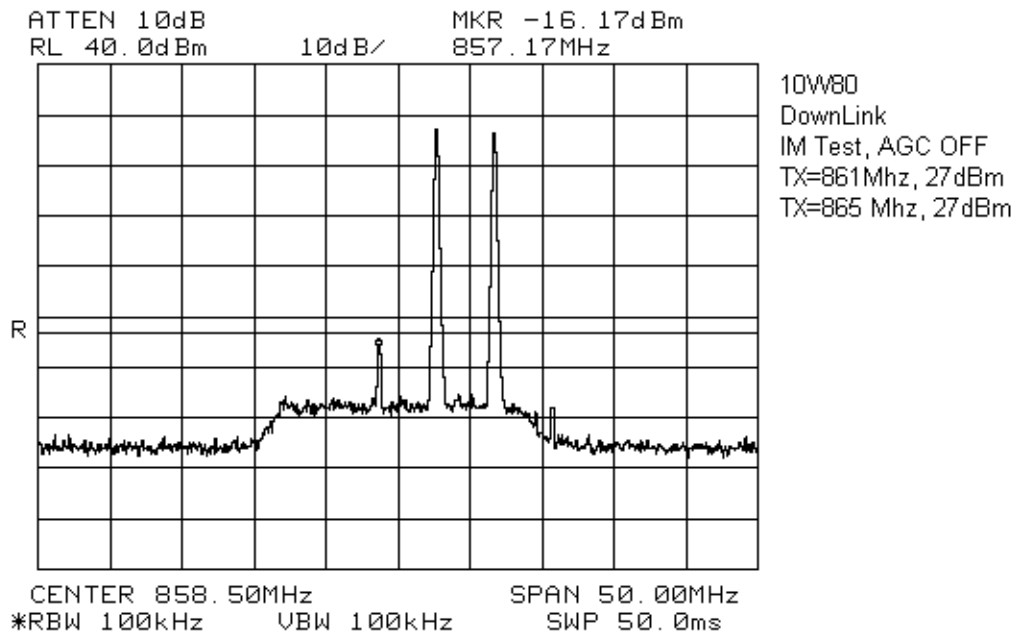
EQUIPMENT: MW-CBDA-ESMR-10W80A & MW-CBDA-ESMR-1W80A

FCC ID: OIWCBD AESMR10W80 & OIWCBD AESMR1W80A



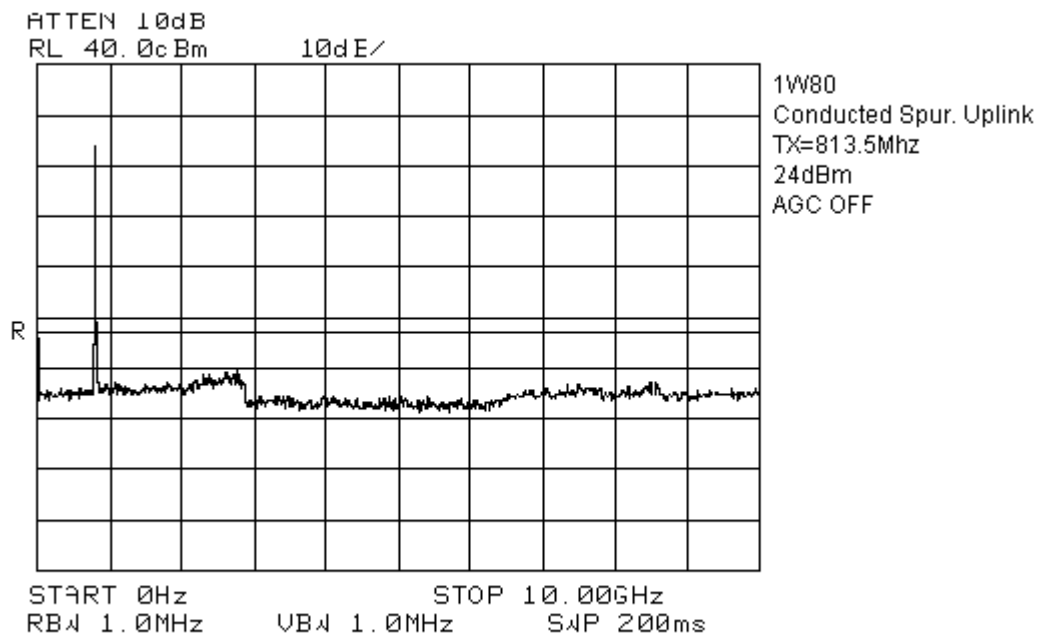
EQUIPMENT: MW-CBDA-ESMR-10W80A & MW-CBDA-ESMR-1W80A

FCC ID: OIWCBD AESMR10W80 & OIWCBD AESMR1W80A



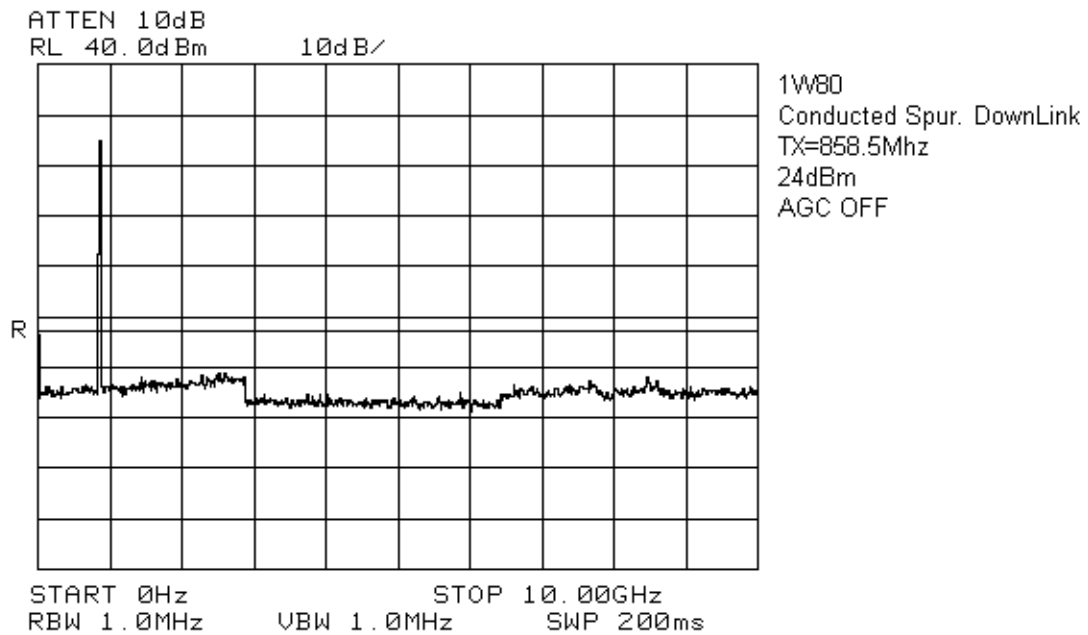
EQUIPMENT: MW-CBDA-ESMR-10W80A & MW-CBDA-ESMR-1W80A

FCC ID: OIWCBD AESMR10W80 & OIWCBD AESMR1W80A



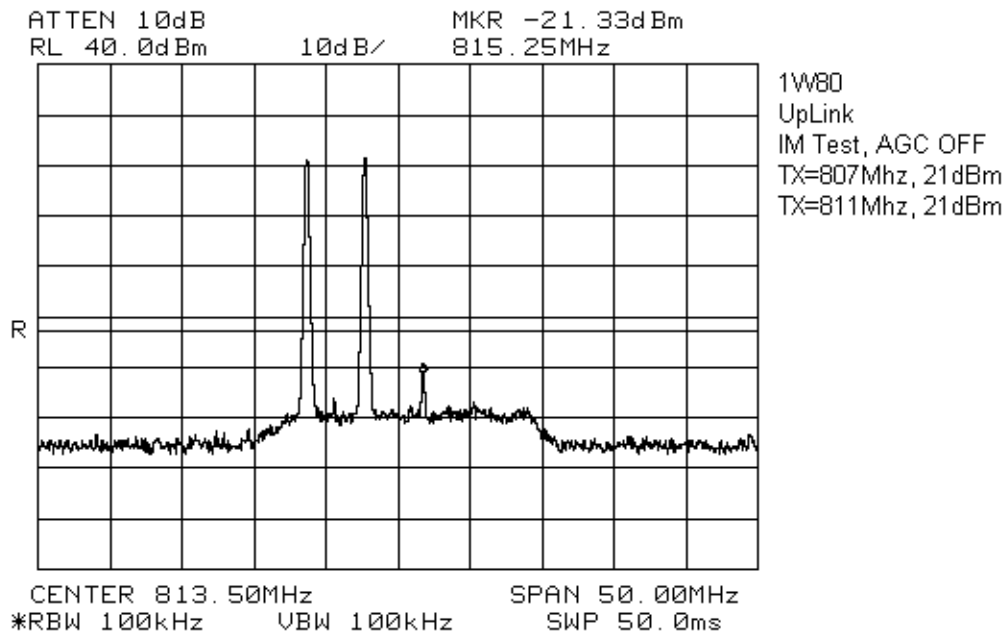
EQUIPMENT: MW-CBDA-ESMR-10W80A & MW-CBDA-ESMR-1W80A

FCC ID: OIWCBD AESMR10W80 & OIWCBD AESMR1W80A



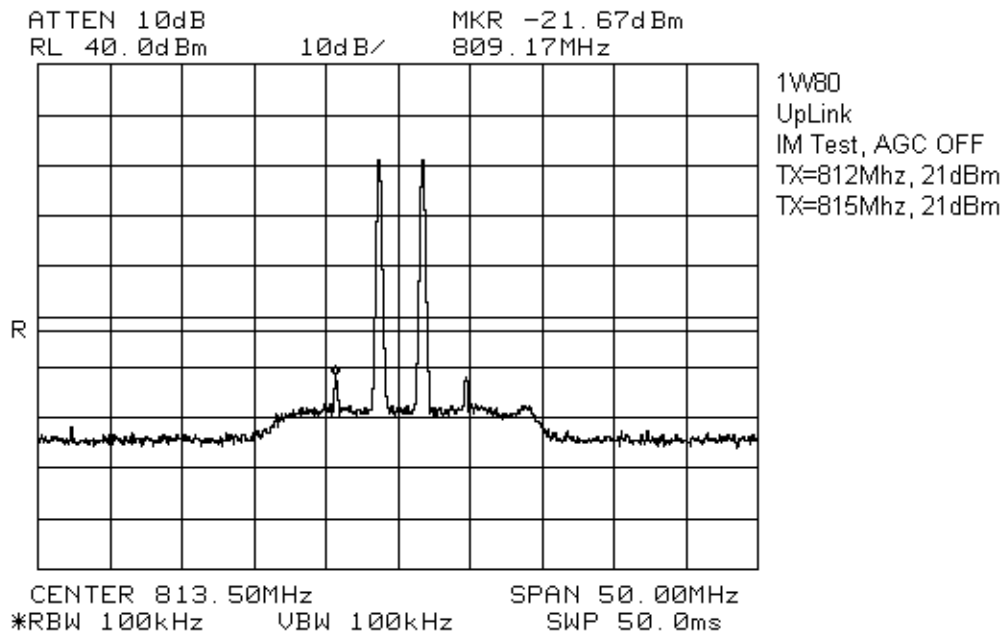
EQUIPMENT: MW-CBDA-ESMR-10W80A & MW-CBDA-ESMR-1W80A

FCC ID: OIWCBD AESMR10W80 & OIWCBD AESMR1W80A



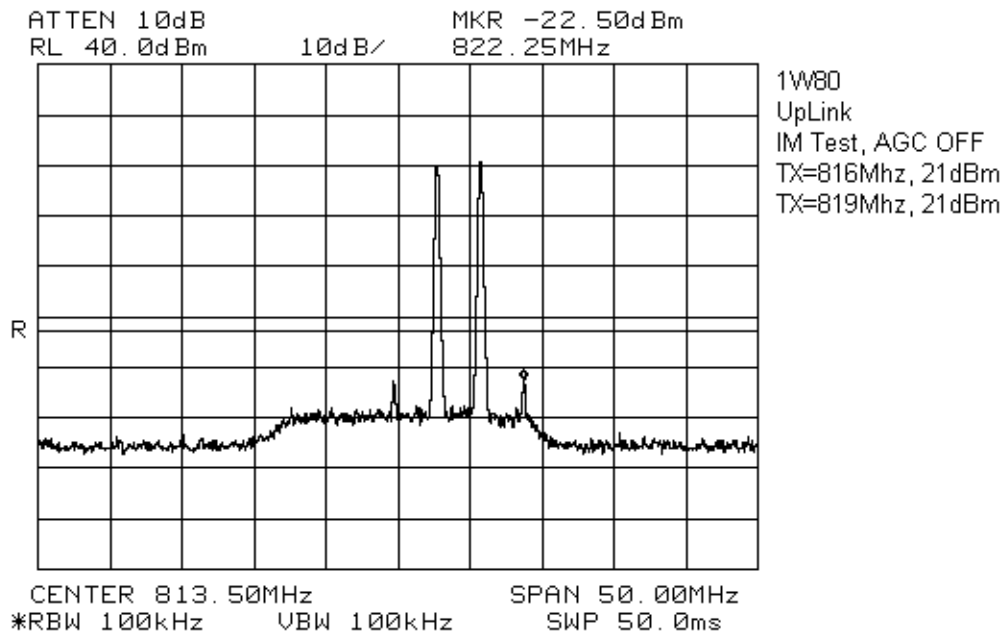
EQUIPMENT: MW-CBDA-ESMR-10W80A & MW-CBDA-ESMR-1W80A

FCC ID: OIWCBDAESMR10W80 & OIWCBDAESMR1W80A



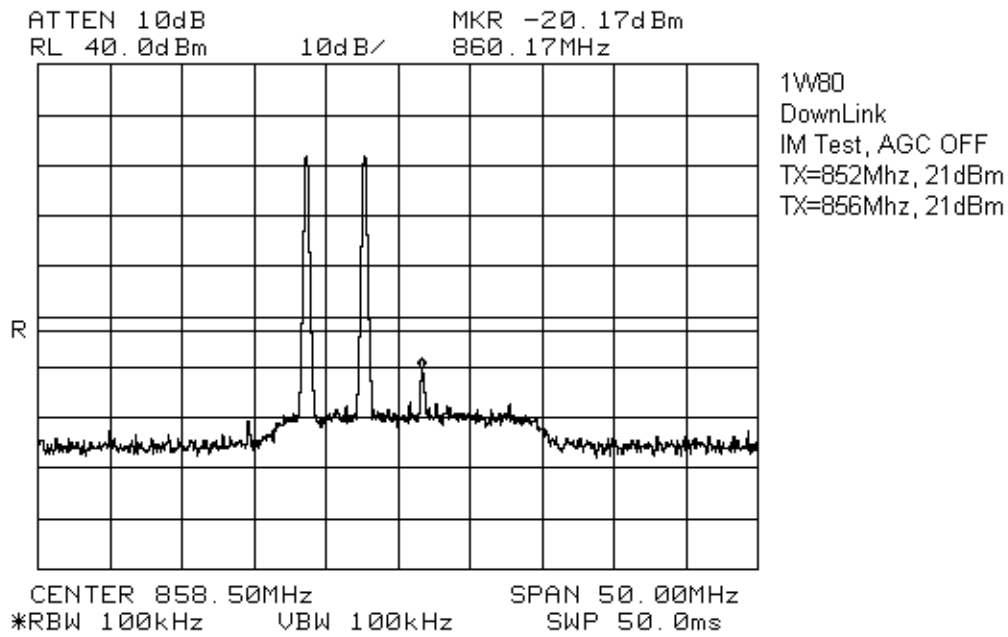
EQUIPMENT: MW-CBDA-ESMR-10W80A & MW-CBDA-ESMR-1W80A

FCC ID: OIWCBD AESMR10W80 & OIWCBD AESMR1W80A



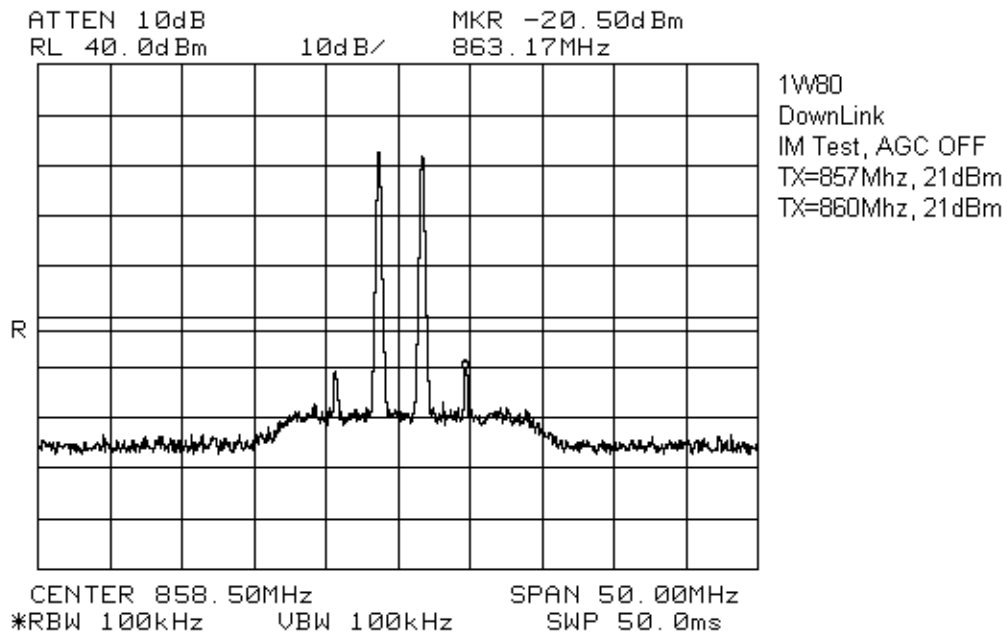
EQUIPMENT: MW-CBDA-ESMR-10W80A & MW-CBDA-ESMR-1W80A

FCC ID: OIWCBD AESMR10W80 & OIWCBD AESMR1W80A



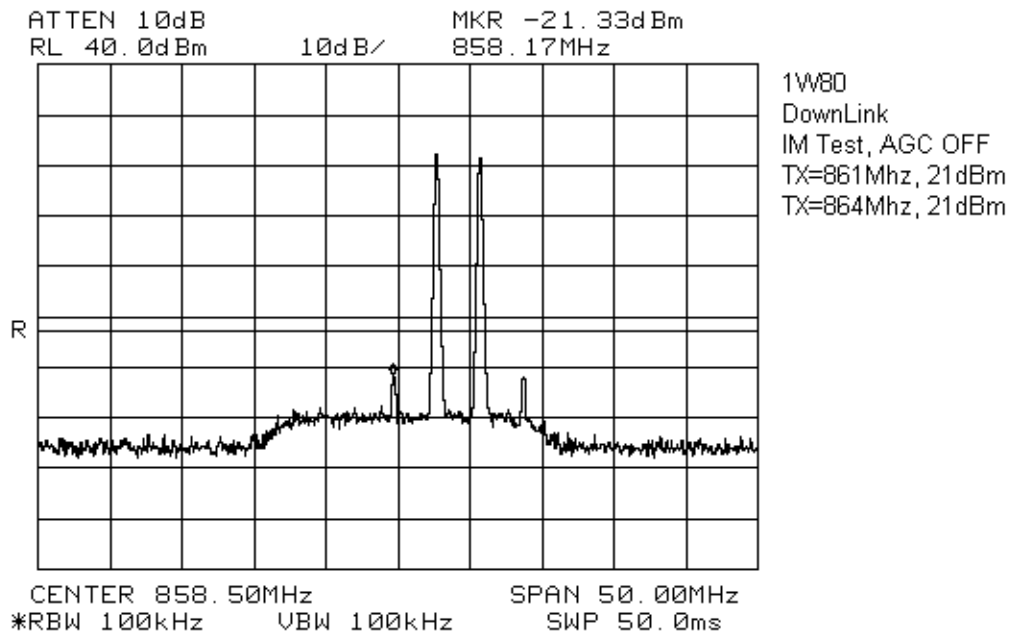
EQUIPMENT: MW-CBDA-ESMR-10W80A & MW-CBDA-ESMR-1W80A

FCC ID: OIWCBD AESMR10W80 & OIWCBD AESMR1W80A



EQUIPMENT: MW-CBDA-ESMR-10W80A & MW-CBDA-ESMR-1W80A

FCC ID: OIWCBD AESMR10W80 & OIWCBD AESMR1W80A



EQUIPMENT: MW-CBDA-ESMR-10W80A & MW-CBDA-ESMR-1W80A

FCC ID: OIWCBD AESMR10W80 & OIWCBD AESMR1W80A

Section 5. Field Strength of Spurious Emissions

Para. No.: 2.1053

Test Performed By: Glen Westwell

Date of Test: August 31, 2001

Minimum Standard: -13dBm

Test Results: Complies.

Measurement Data: No emissions detected.

The spectrum for both amplifiers was searched up to the 10th harmonic of the fundamental frequency of operation. No emissions were detected within 20dB of the specification limit.

*EQUIPMENT: MW-CBDA-ESMR-10W80A & MW-CBDA-ESMR-1W80A**FCC ID: OIWCBD AESMR10W80 & OIWCBD AESMR1W80A*

Section 6. Test Equipment List

CAL CYCLE	EQUIPMENT	MANUFACTURER	MODEL	SERIAL	LAST CAL.	NEXT CAL.
1 Year	Spectrum Analyzer	Hewlett Packard	8564E	3846A01407	Mar. 2/01	Mar. 2/02
1 Year	Attenuator	Narda	768-10	9707	Aug. 23/99	Aug. 23/00
1 Year	Attenuator	Narda	768-10	9709	Oct. 8/99	Oct. 8/00
1 Year	Attenuator	Narda	769-20	4153	Oct. 1/99	Oct. 1/00
2 Year	RF Millivoltmeter	Rohde & Schwarz	URV5	FA000420	Oct. 6/99	Oct. 6/01
2 Year	Power Sensor	Rohde & Schwarz	URV5-Z5	FA000419	Oct. 6/99	Oct. 6/01
1 Year	Horn Antenna	EMCO #2	3115	4336	Dec. 1/00	Dec. 1/01
3 Year	Signal Generator	Rohde & Schwarz	SM1Q03	DE22004	Sept. 18/00	Sept. 18/03
3 Year	Standard Gain Horn	Electro-Metrics	SH-50/60-1	FA000479	July 7/00	July 7/01
3 Year	RF Generator	Rohde & Schwarz	SIMI03E	DE24154	Oct. 4/99	Oct. 4/01

NA: Not Applicable
NCR: No Cal Required
COU: CAL On Use

EQUIPMENT: MW-CBDA-ESMR-10W80A & MW-CBDA-ESMR-1W80A

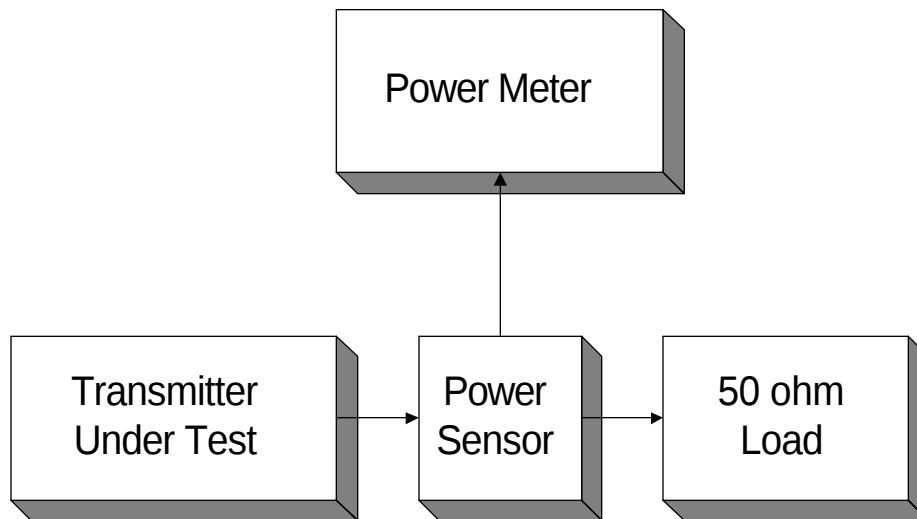
FCC ID: OIWCBD AESMR10W80 & OIWCBD AESMR1W80A

Annex A

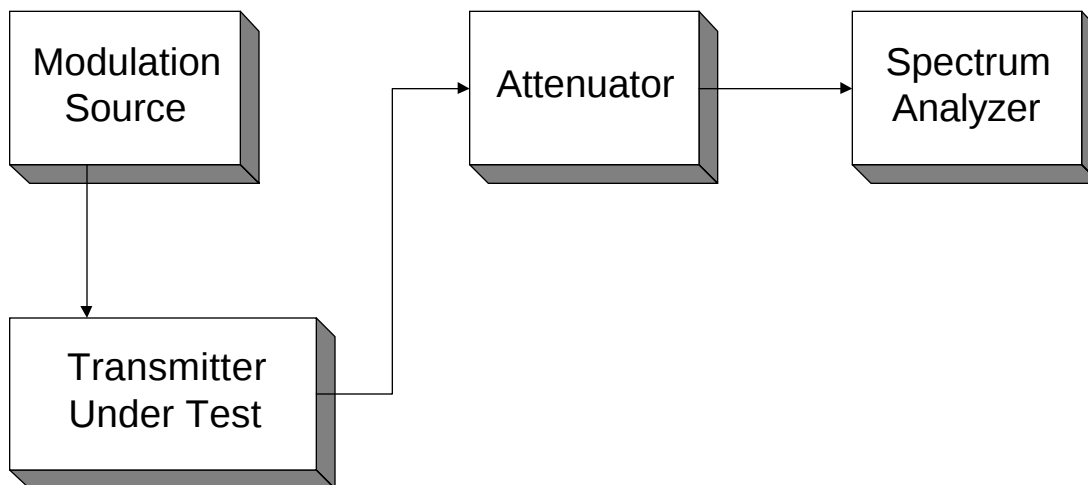
Test Diagrams

EQUIPMENT: MW-CBDA-ESMR-10W80A & MW-CBDA-ESMR-1W80A
FCC ID: OIWCBD AESMR10W80 & OIWCBD AESMR1W80A

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

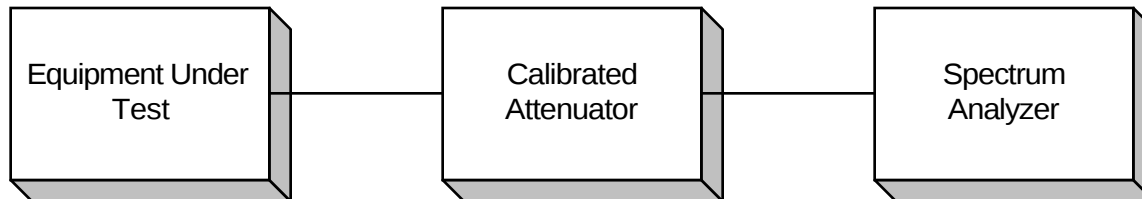


Para. No. 2.1049 - Occupied Bandwidth



EQUIPMENT: MW-CBDA-ESMR-10W80A & MW-CBDA-ESMR-1W80A
FCC ID: OIWCBD AESMR10W80 & OIWCBD AESMR1W80A

Para. No. 2.1051 - Spurious Emissions at Antenna Terminals



Para. No. 2.1053 - Field Strength of Spurious Radiation

