Test Report:	1W03979
Applicant:	Radio Frequency Systems 4100 SW Research Way Corvallis, OR 97333 USA
Equipment Under Test: **(EUT)**	48710 & 48722 Signal Booster
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:	88

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Annex A Test Diagrams A1

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 & Family Listing	☒	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

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This report applies only to the items tested.

Summary Of Test Data

Name Of Test	Para. No.	Result
RF Power Output	2.1045	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	Complies

Footnotes For N/A's:

Test Conditions:

Indoor Temperature: 24 °C
Humidity: 36 %

Outdoor Temperature: 23 °C
Humidity: 38 %

.

Section 2. General Equipment Specification

Manufacturer:	Radio Frequency Systems
Model No.:	48710 & 48722
Serial No.:	48710: 01231521624 48722: 01231521625
Date Received In Laboratory:	June 16, 2001
Nemko Identification No.:	Item # 1 & 2
Supply Voltage Input:	120 VAC
Frequency Range:	48710 Downlink: 851 – 869MHz Uplink: 806 – 824MHz 48722 Downlink: 935 – 941MHz Uplink: 896 – 902MHz
Output Impedance:	50 ohms
RF Output (Rated):	DXW & D7W = 0.5W (27dBm) F3E = 1W (30 dBm)
Emission Designator:	DXW D7W F3E

Section 3. RF Power Output

Para. No.: 2.1045

Test Performed By: Glen Westwell	**Date of Test:** June 28, 2001

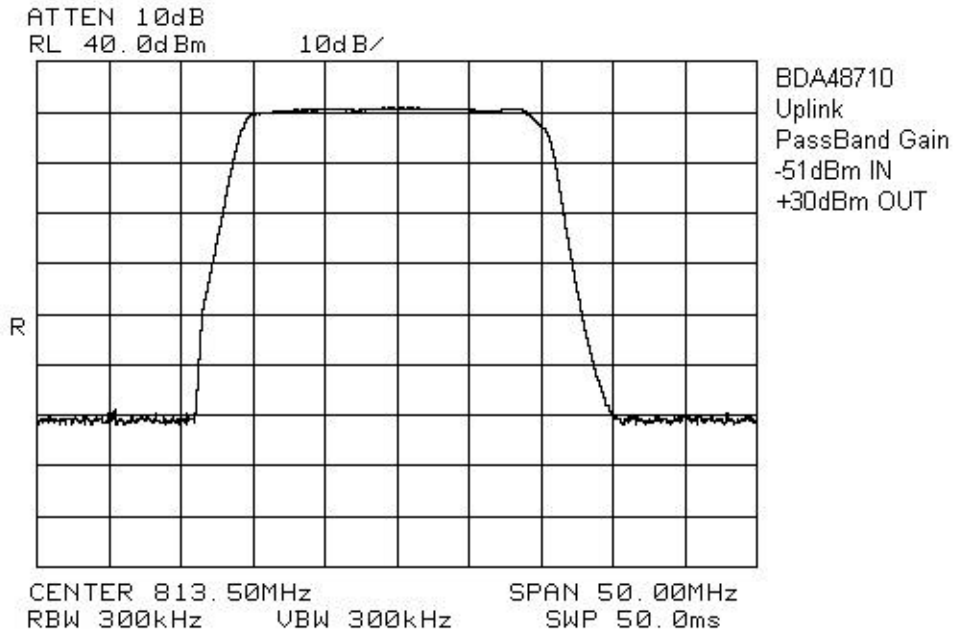
Minimum Standard: ± 1dB

Test Results: Complies.

Measurement Data: See attached graphs.

The maximum RF output power is within ± 1dB of the manufacturer's rating. The RF output power is de-rated according to the number of channels via AGC and is equal to Pmax –10LogN.

Pmax = Maximum RF output power.
N = Number of channels.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10dB/
R
BDA48710
Uplink
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+30dBm OUT
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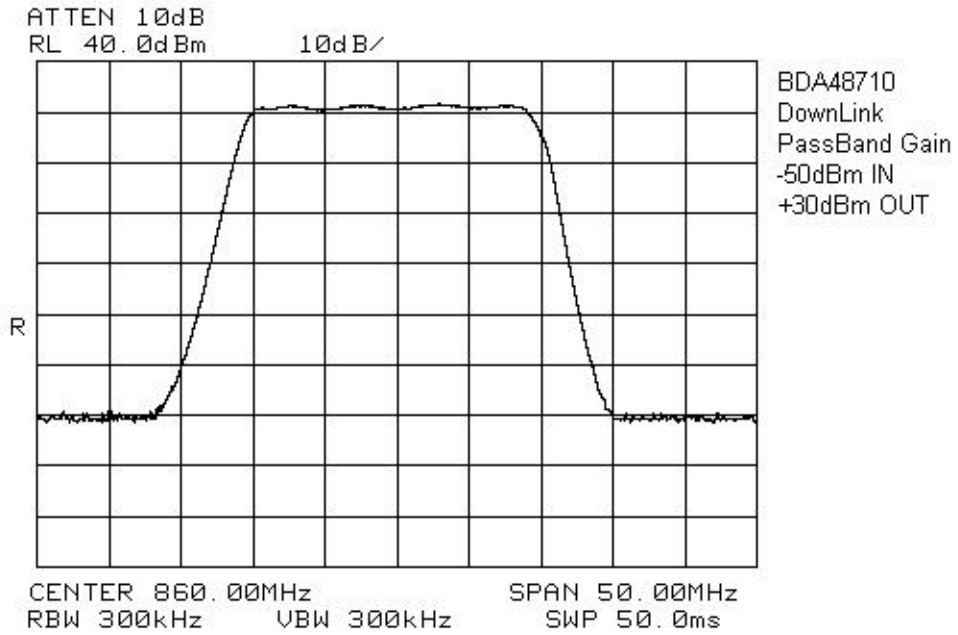
SPAN 50.00MHz
RBW 300kHz
VBW 300kHz
SWP 50.0ms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DownLink
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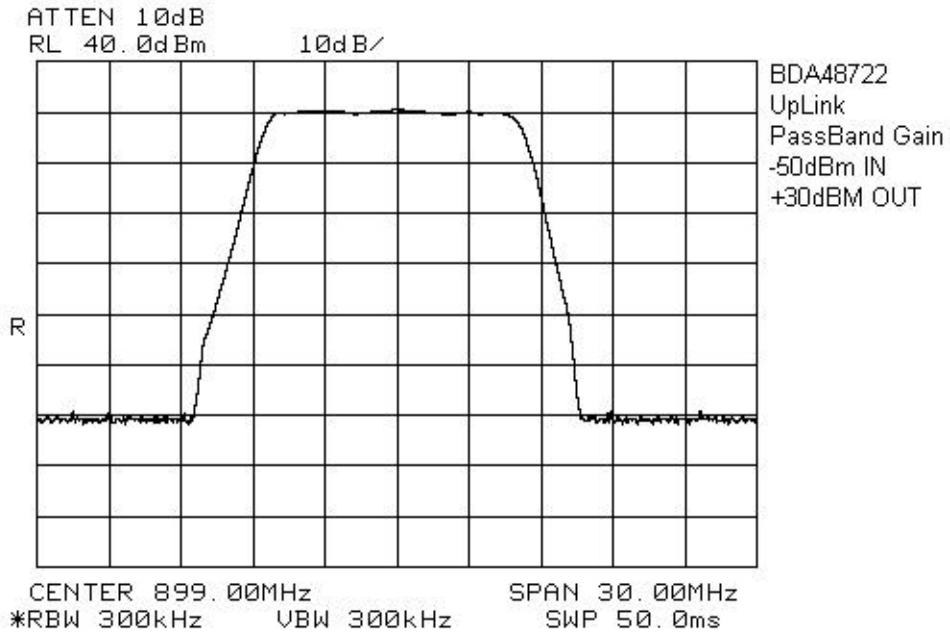
SPAN 50.00MHz
RBW 300kHz
VBW 300kHz
SWP 50.0ms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UpLink
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+30dBM OUT
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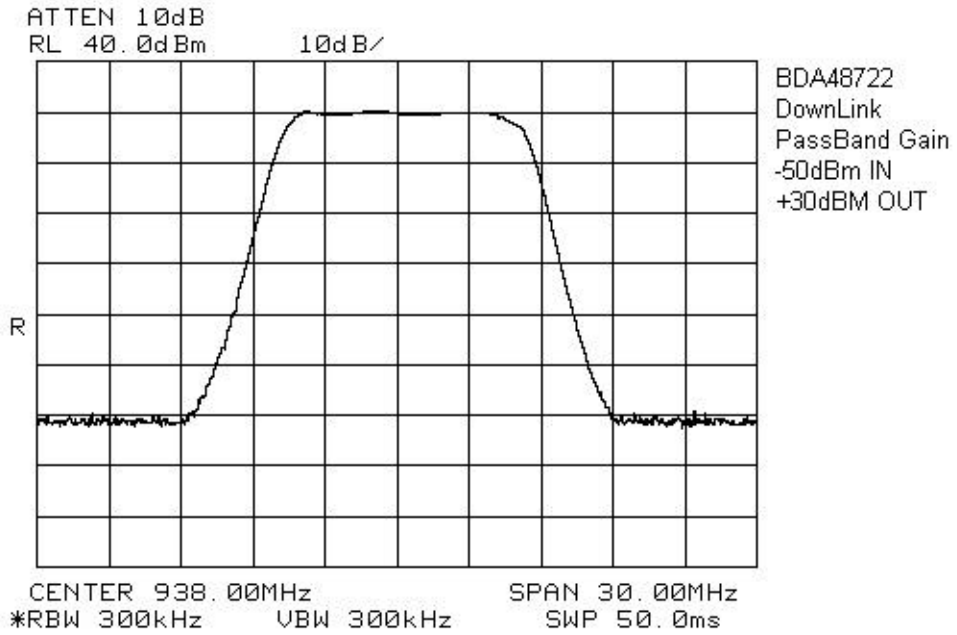
SPAN 30.00MHz
*RBW 300kHz
VBW 300kHz
SWP 50.0ms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R
BDA48722
DownLink
PassBand Gain
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+30dBM OUT
CENTER 938.00MHz
SPAN 30.00MHz
*RBW 300kHz
VBW 300kHz
SWP 50.0ms

Section 4. Occupied Bandwidth

Para. No.: 2.1049

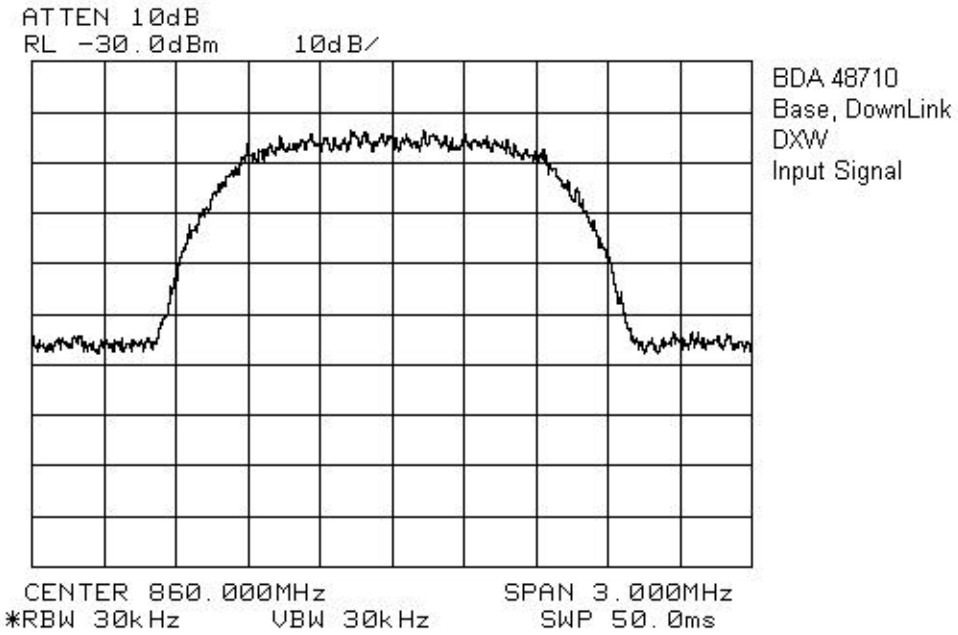
Test Performed By: Glen Westwell	**Date of Test:** June 28, 2001

Minimum Standard: N/A

Test Results: Complies. There is no degradation in the output signal.

Test Data: See attached graph(s).

The occupied bandwidth was measured by comparison of the 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 signal booster.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BDA 48710
Base, DownLink
DXW
Input Signal
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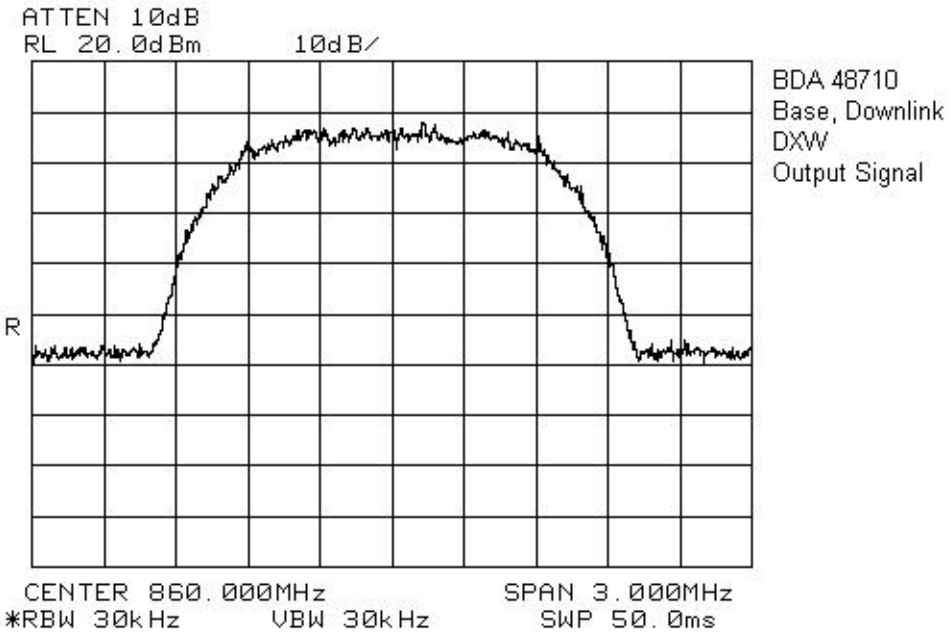
SPAN 3.000MHz
*RBW 30kHz
VBW 30kHz
SWP 50.0ms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10dB/
R
BDA 48710
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Output Signal
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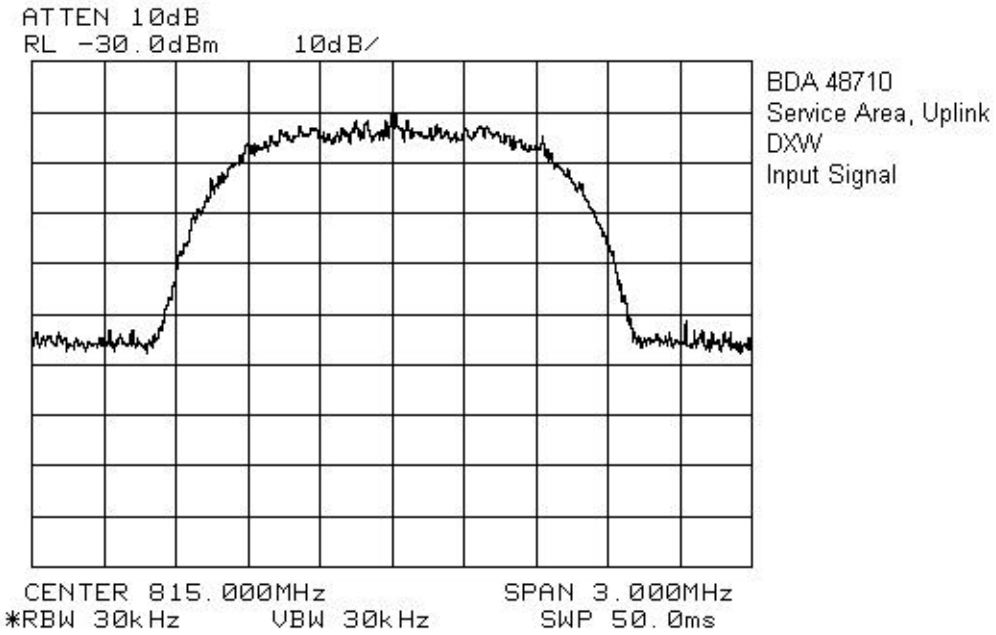
SPAN 3.000MHz
*RBW 30kHz
VBW 30kHz
SWP 50.0ms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BDA 48710
Service Area, Uplink
DXW
Input Signal
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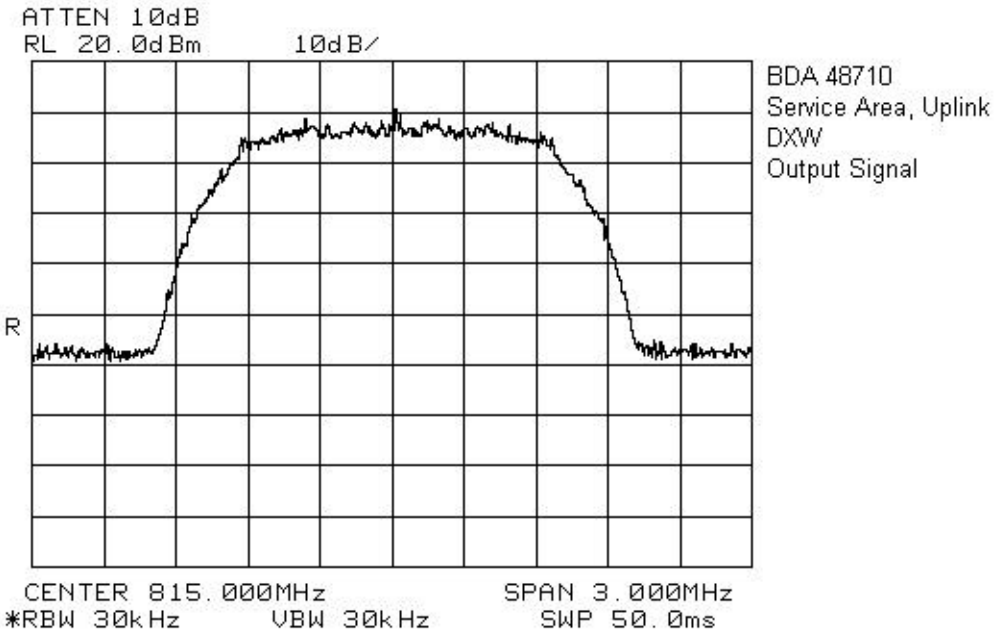
SPAN 3.000MHz
*RBW 30kHz
VBW 30kHz
SWP 50.0ms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10dB/
R
BDA 48710
Service Area, Uplink
DXW
Output Signal
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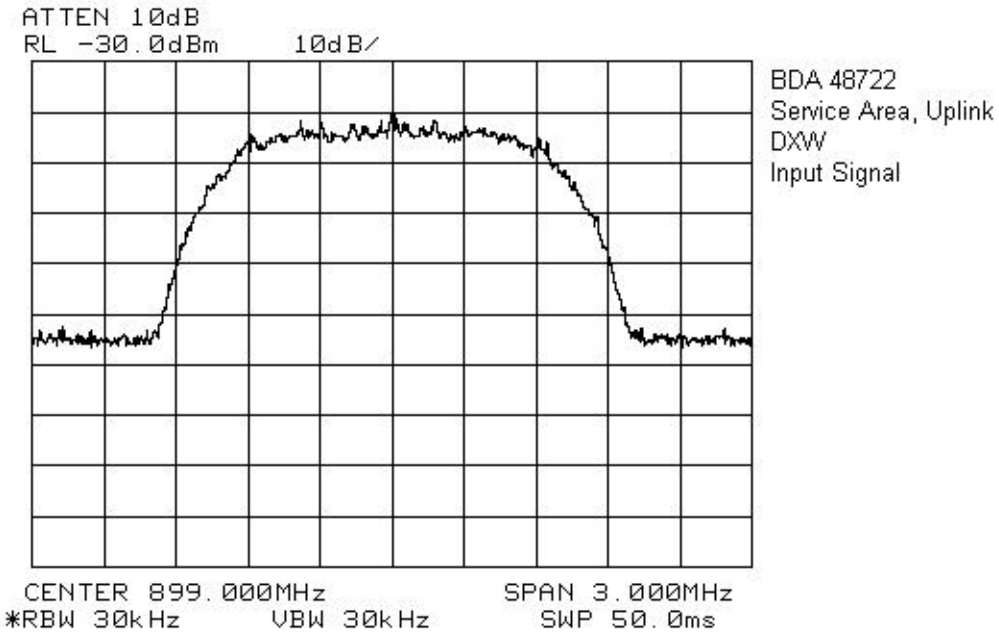
SPAN 3.000MHz
*RBW 30kHz
VBW 30kHz
SWP 50.0ms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BDA 48722
Service Area, Uplink
DXW
Input Signal
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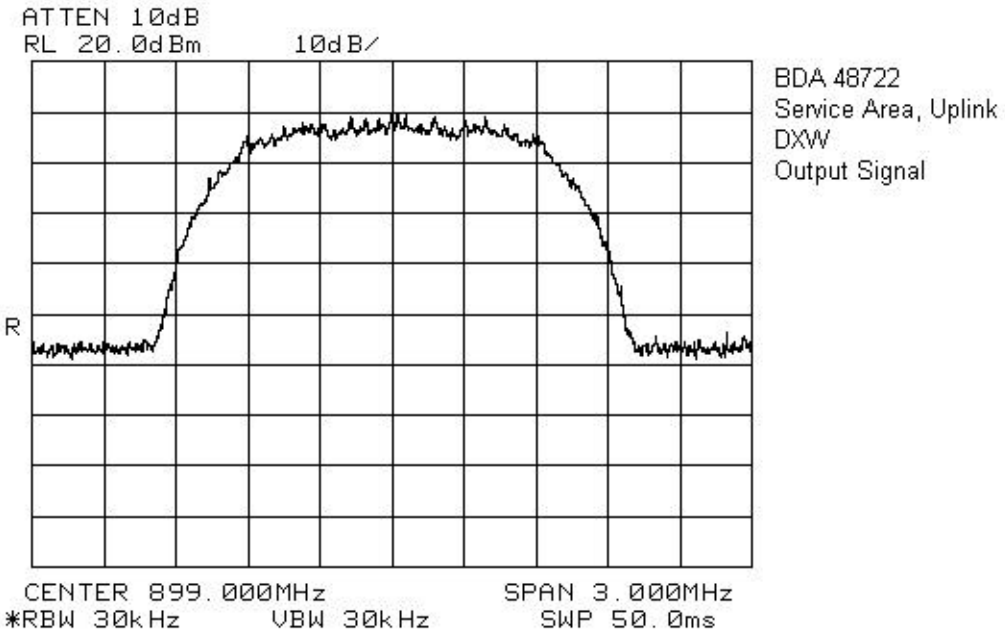
SPAN 3.000MHz
*RBW 30kHz
VBW 30kHz
SWP 50.0ms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10dB/
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DXW
Output Signal
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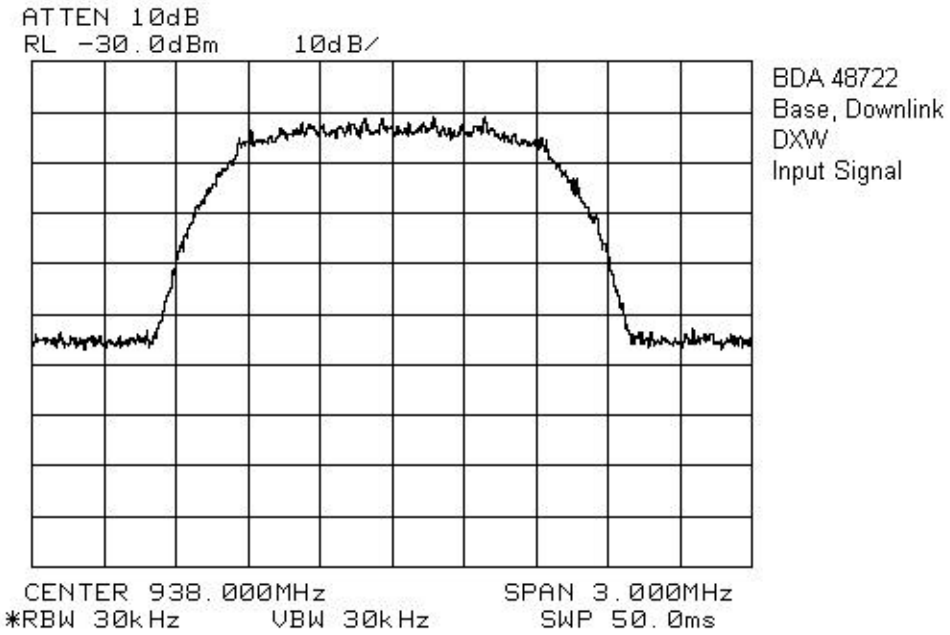
*RBW 30kHz
VBW 30kHz
SWP 50.0ms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Base, Downlink
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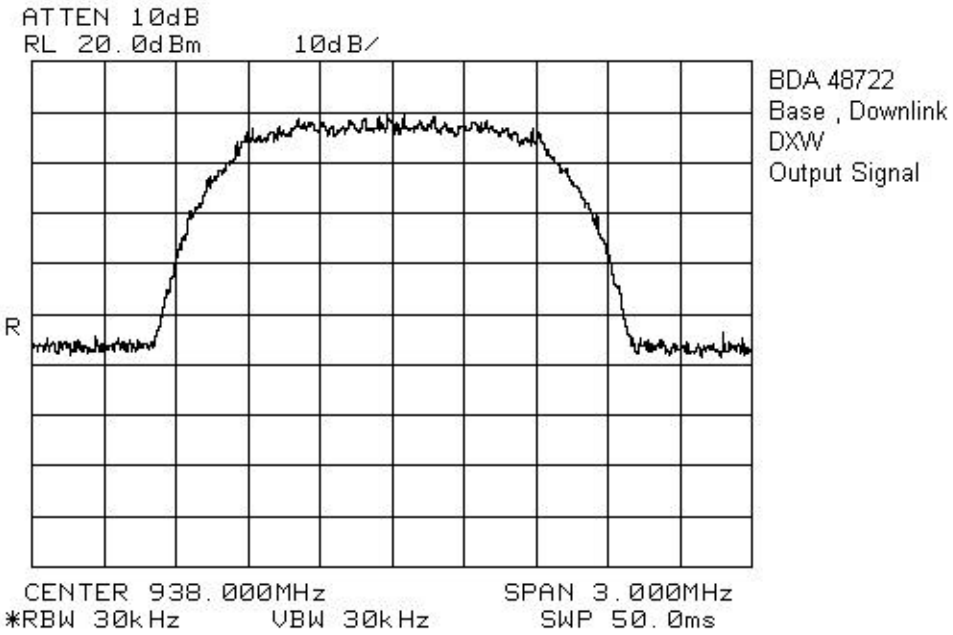
SPAN 3.000MHz
*RBW 30kHz
VBW 30kHz
SWP 50.0ms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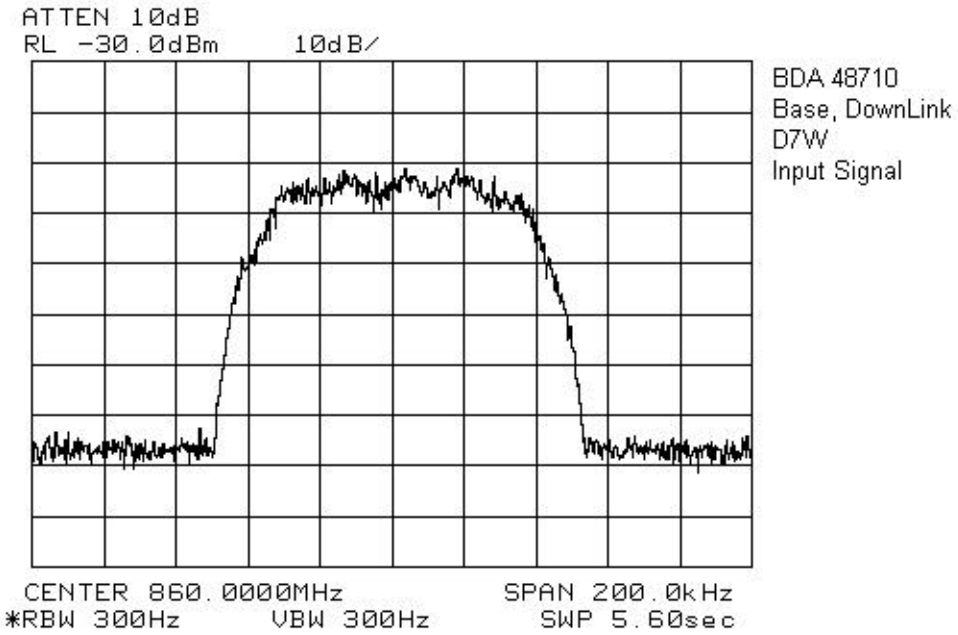
VBW 30kHz
SWP 50.0ms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D7W
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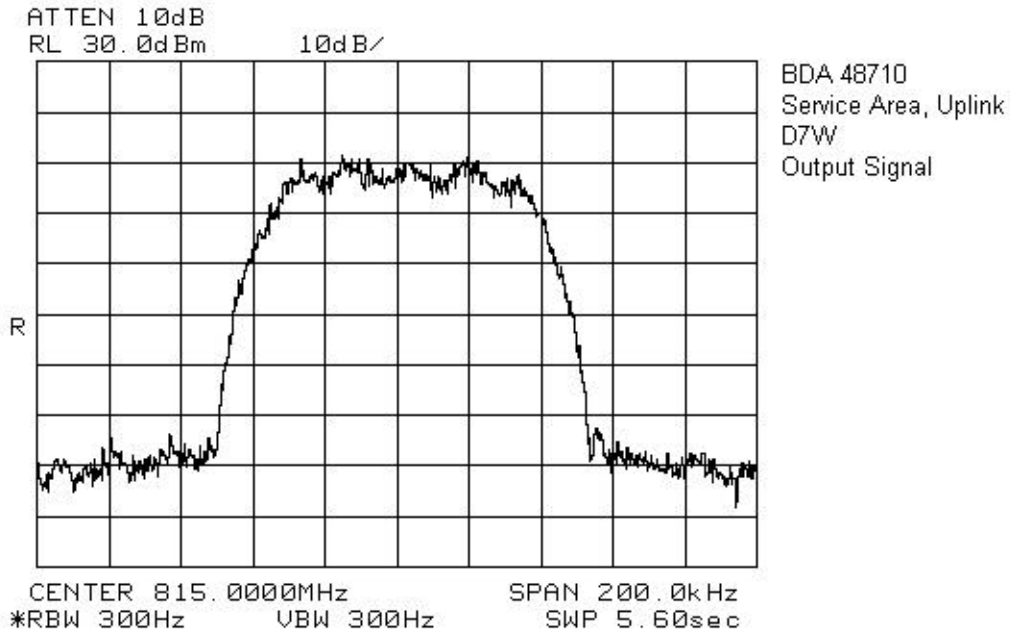
VBW 300Hz
SWP 5.60sec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D7W
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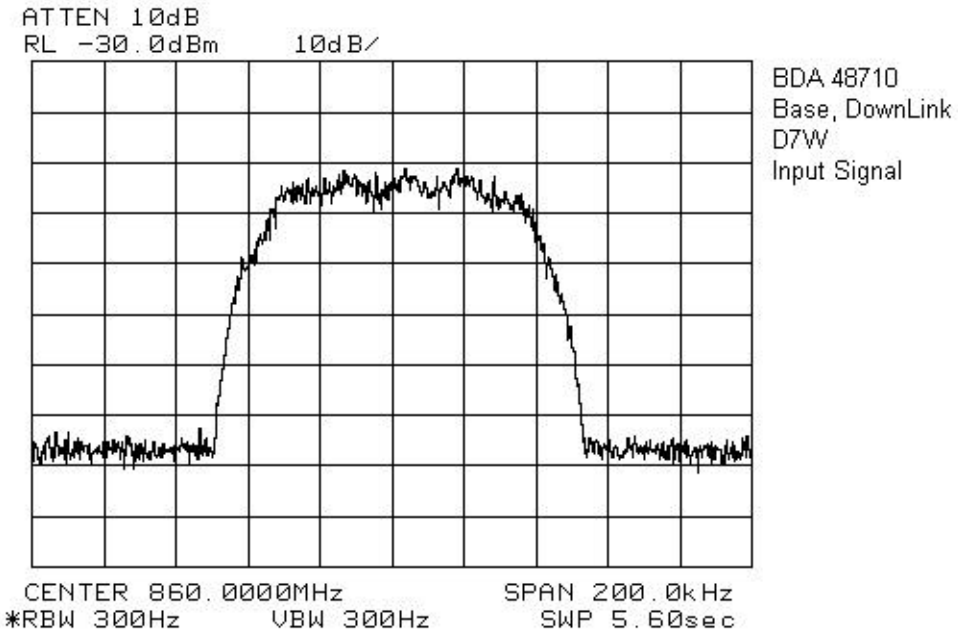
SWP 5.60sec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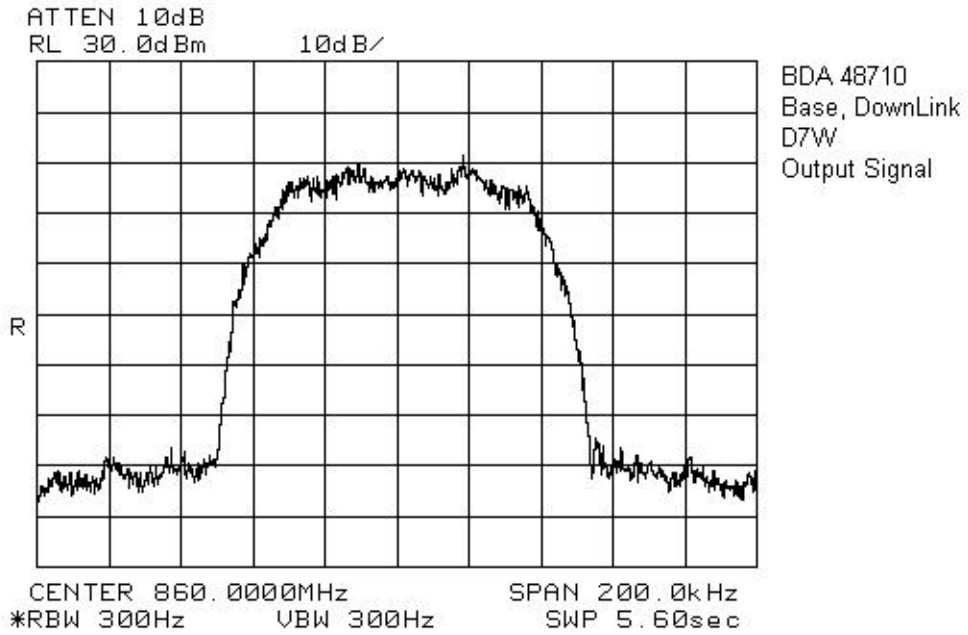
VBW 300Hz
SWP 5.60sec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10dB/
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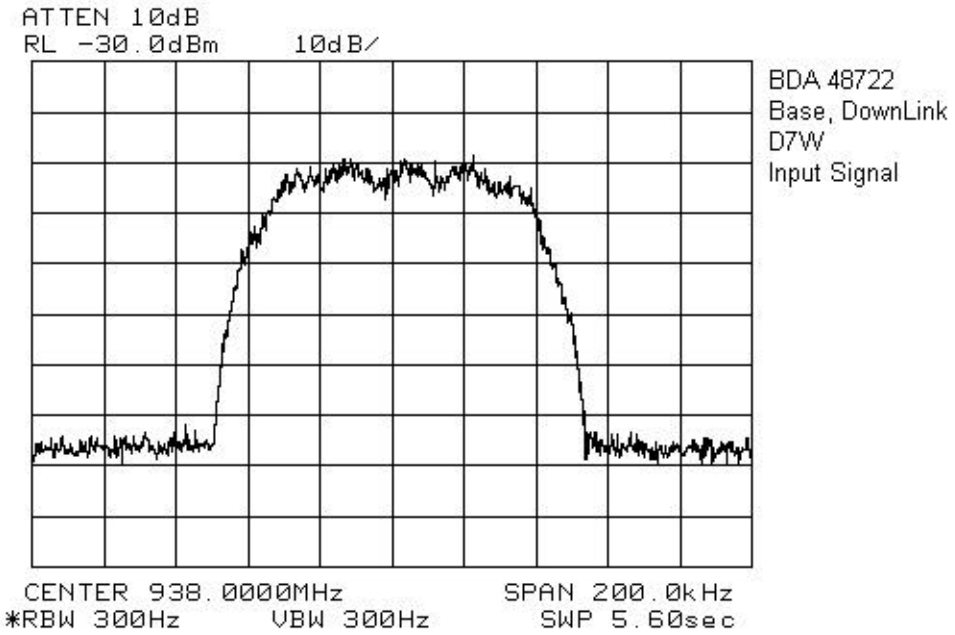
SPAN 200.0kHz
*RBW 300Hz
VBW 300Hz
SWP 5.60sec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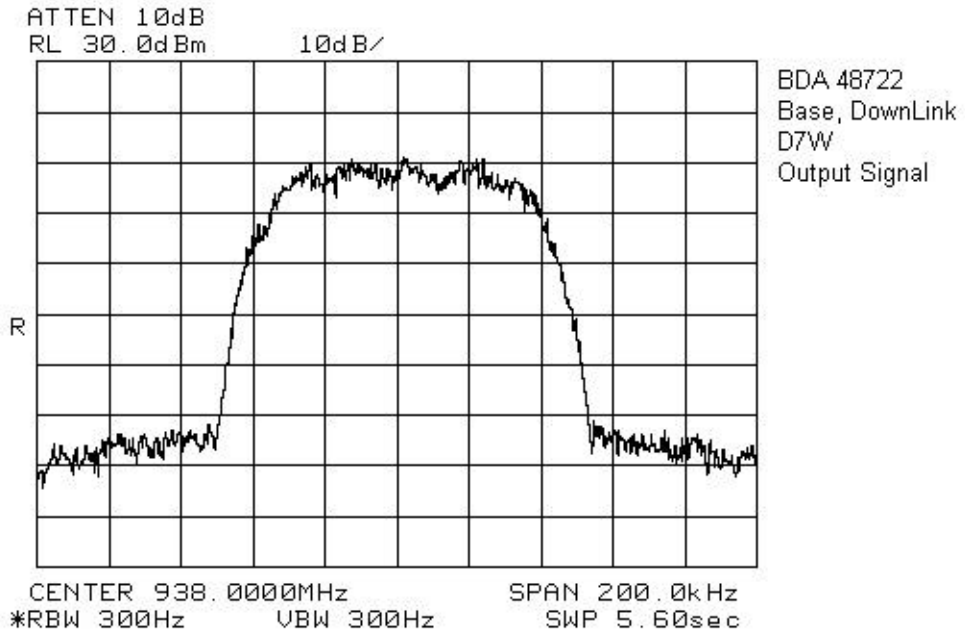
VBW 300Hz
SWP 5.60sec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10dB/
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BDA 48722
Base, DownLink
D7W
Output Signal
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SPAN 200.0kHz
*RBW 300Hz
VBW 300Hz
SWP 5.60sec