



Nemko



Test Report: 2W04890

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

Equipment Under Test: CBDA PCSAC 10W80
(EUT) Indoor Repeater

FCC ID: OIWCBAPCSAC10W80

In Accordance With: **FCC Part 24, Subpart E**

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

Authorized By: Glen Westwell, Wireless Technologist

Date: 13 June 2002

Total Number of Pages: 24

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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 24, Subpart E.

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.

The EUT Connects to a Base Station. Therefore only the Downlink Direction was tested.

A handwritten signature in black ink, appearing to read "Kevin Carr".

TESTED BY: _____

Kevin Carr, EMC Specialist

DATE: 13 June 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.

Nemko Canada Inc.

PROJECT NO.:2W04890

EQUIPMENT: CBDA PCSAC 10W80

Summary Of Test Data

Name Of Test	Para. No.	Result
RF Power Output	2.1046	Complied.
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	Complied.
Spurious Emissions at Antenna Terminals	2.1051	Complied.
Field Strength of Spurious Emissions	2.1053	Complied.
Frequency Stability	2.1055	Complied.
Transient Frequency Behavior	—	N/A

Footnotes For N/A's:

Indoor Temperature: 23°C
 Humidity: 38%

Outdoor Temperature: 24°C
 Humidity: 50%

Section 2. General Equipment Specification

Manufacturer:	Dekolink Wireless LTD.
Model No.:	CBDA PCSAC 10W80
Serial No.:	02058001
Date Received In Laboratory:	12June 2002
Nemko Identification No.:	1
Supply Input Voltage:	120 VAC, 60 Hz
Frequency Range:	Downlink: 1930-1990MHz
RF Output (Rated):	Downlink, CDMA: 1.0Watts, 30.0dBm Downlink, TDMA: 1.0Watts, 30.0dBm Downlink, GSM: 1.0Watts, 30.0dBm
Emission Designator	CDMA, DXW TDMA, F9W GSM, GXW

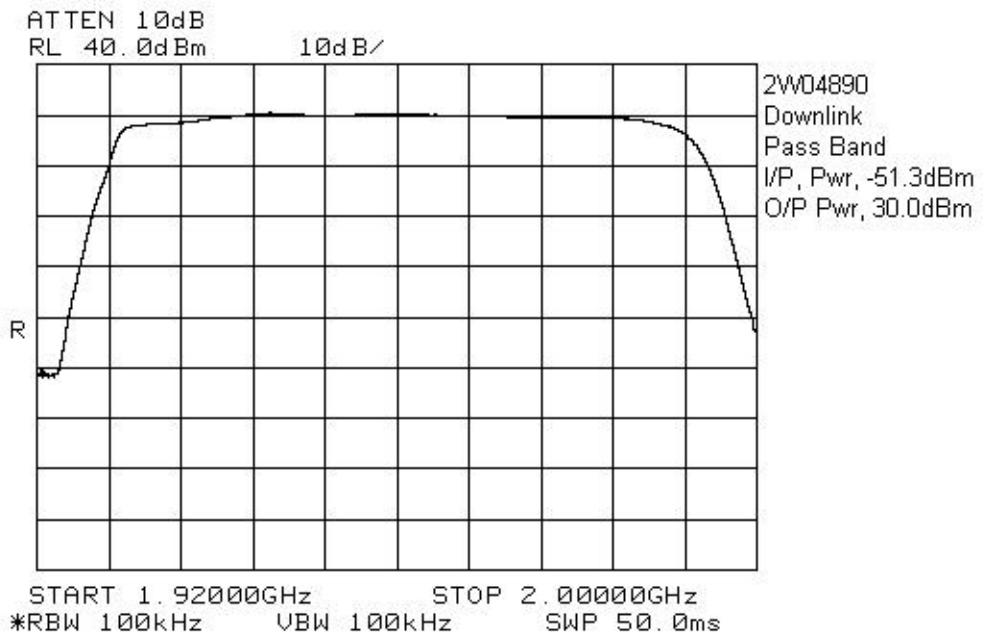
Note: The EUT is a repeater which connects to a base station therefore only the Downlink direction was tested.

Section 3. RF Power Output**Para. No.: 2.1046**

Test Performed By: Kevin Carr	Date of Test: 12 June 2002
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Minimum Standard: 24.232**Test Results:** Complied.**Measurement Data:** See Attached Graphs. The maximum RF output power is within \pm 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 $P_{max} - 10\log N$.

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

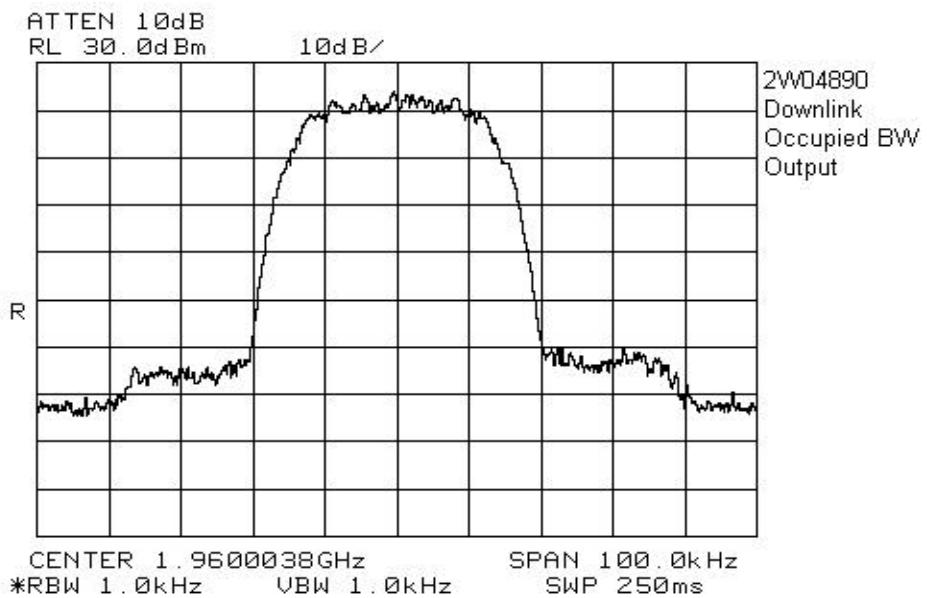
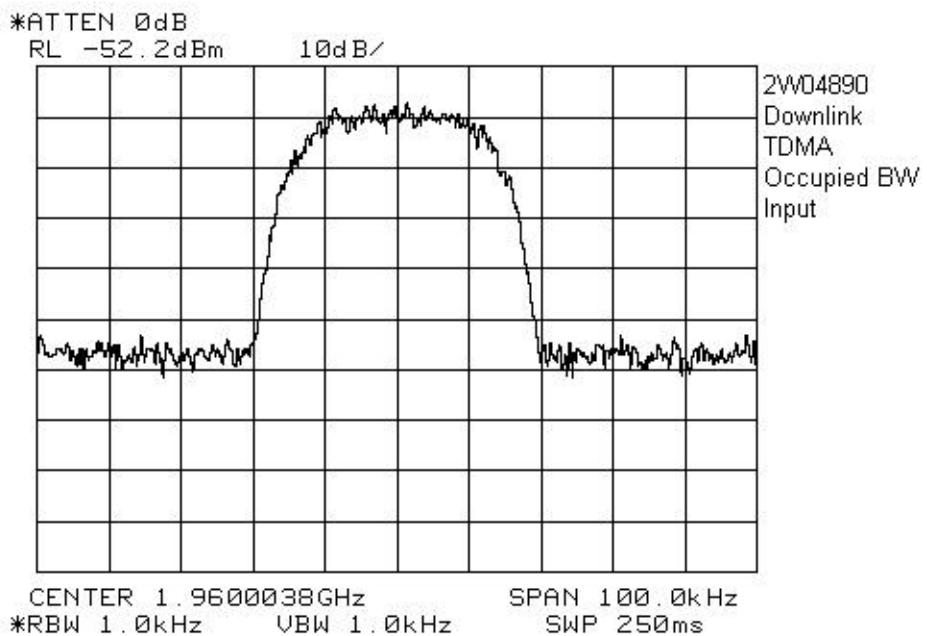


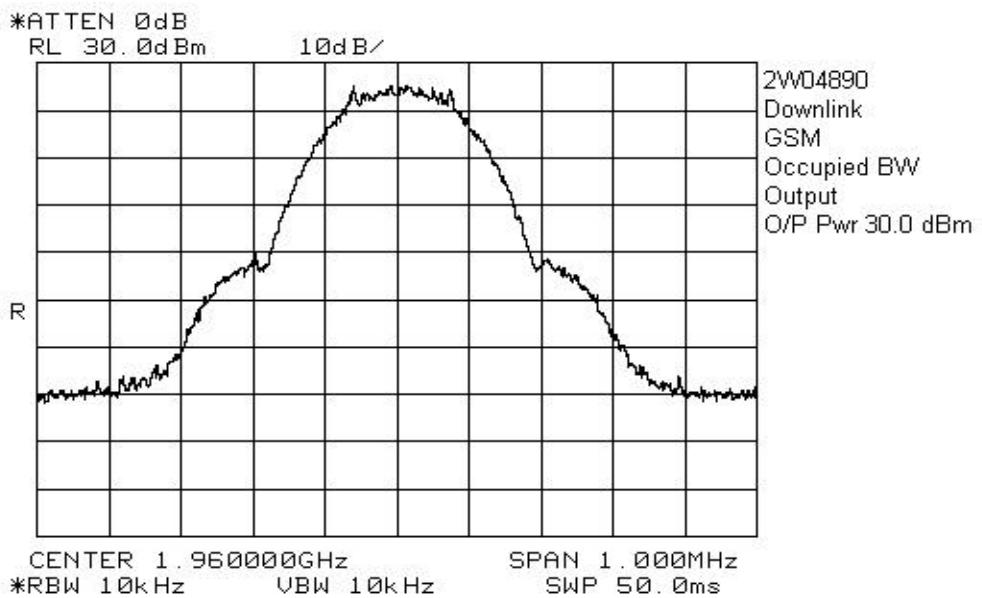
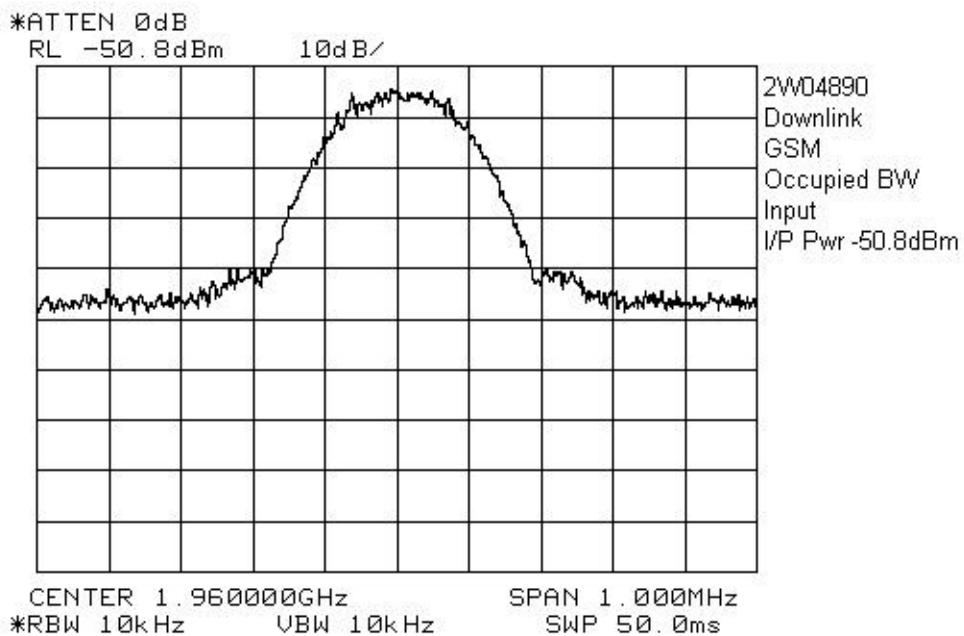
Section 4. Occupied Bandwidth**Para. No.: 2.1049**

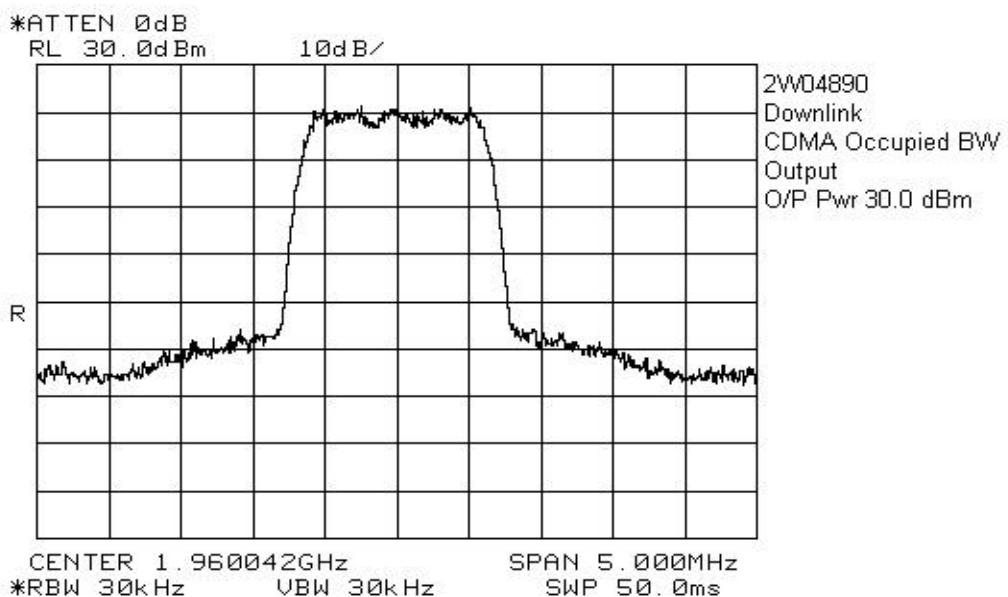
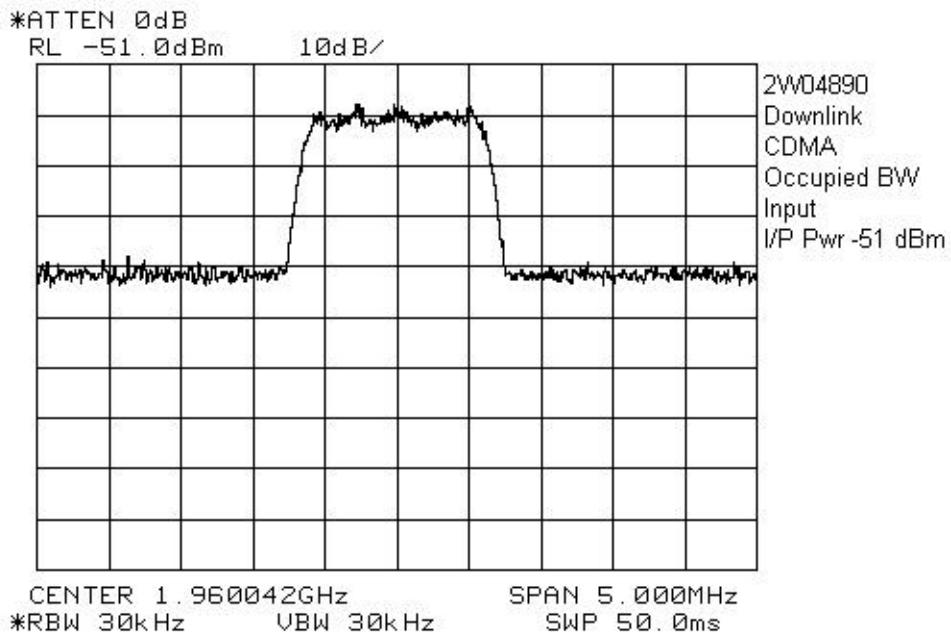
Test Performed By: Kevin Carr	Date of Test: 12 June 2002
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Minimum Standard: 24.238, Input vs Output**Test Results:** Complied**Measurement Data:** See attached graphs.

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: CBDA PCSAC 10W80

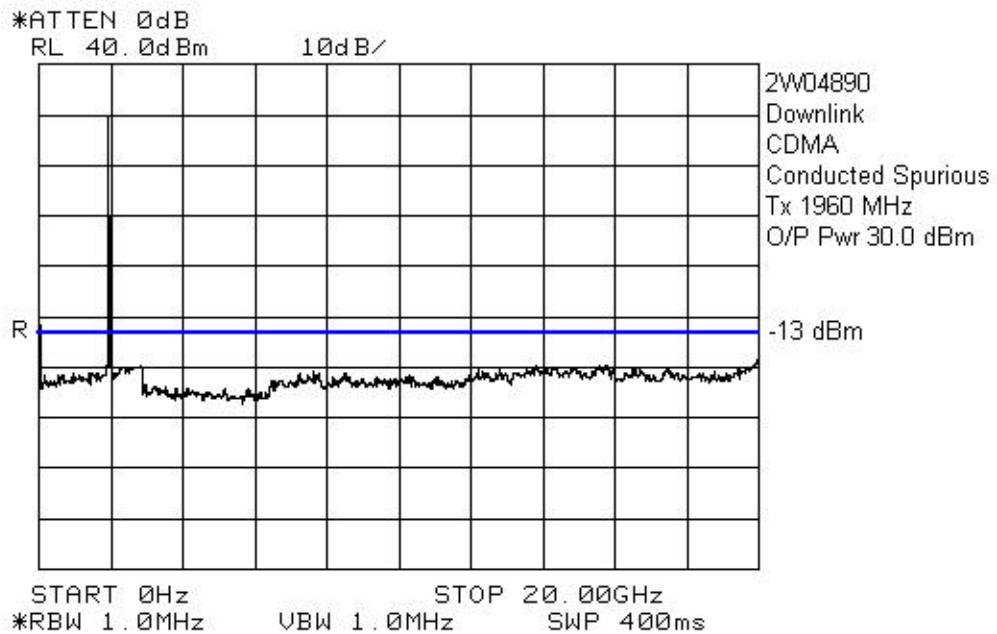
EQUIPMENT: CBDA PCSAC 10W80

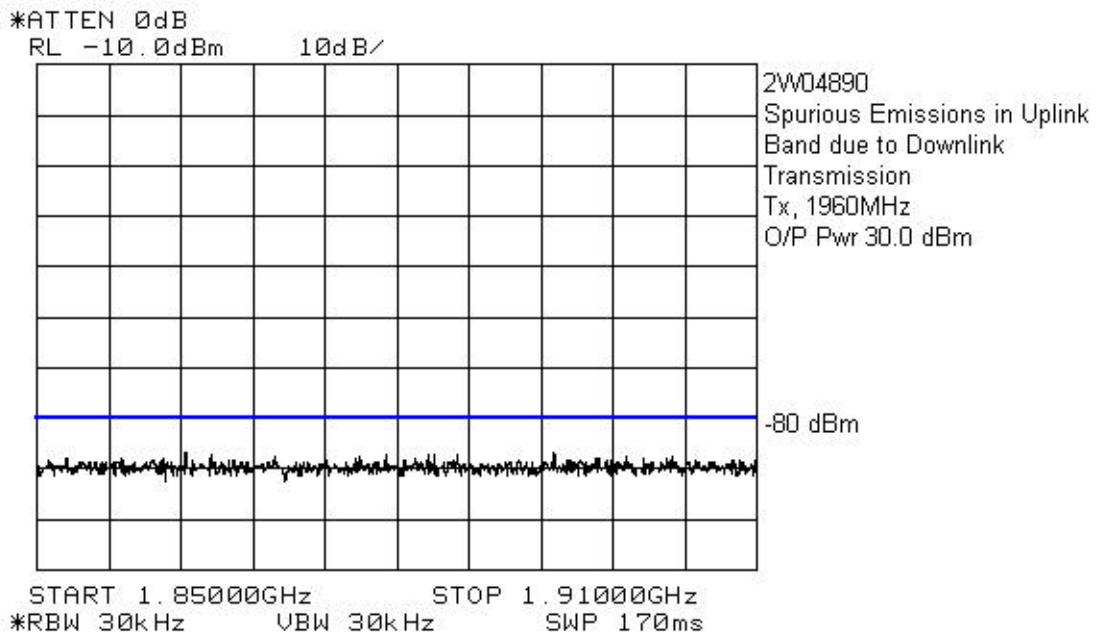
EQUIPMENT: CBDA PCSAC 10W80

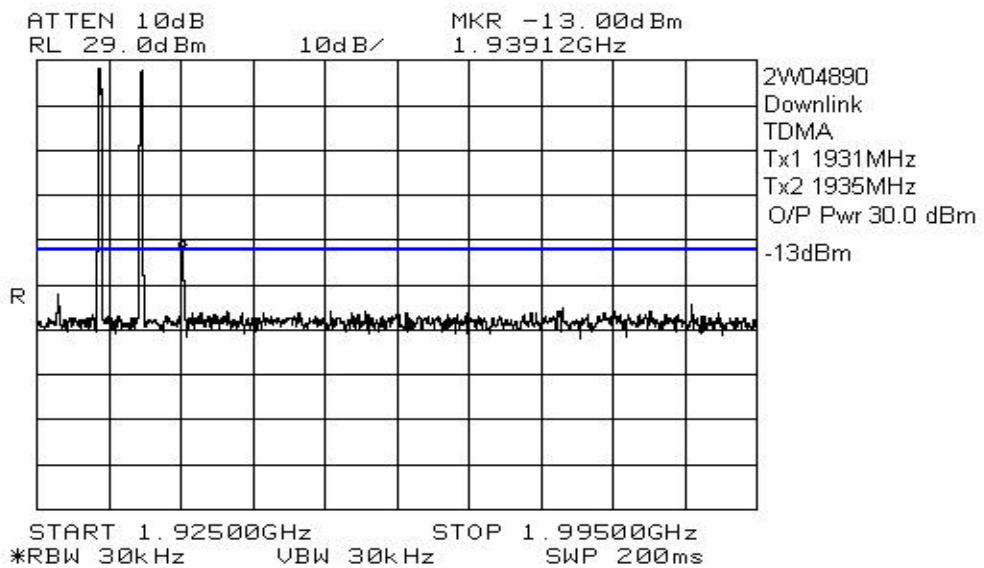
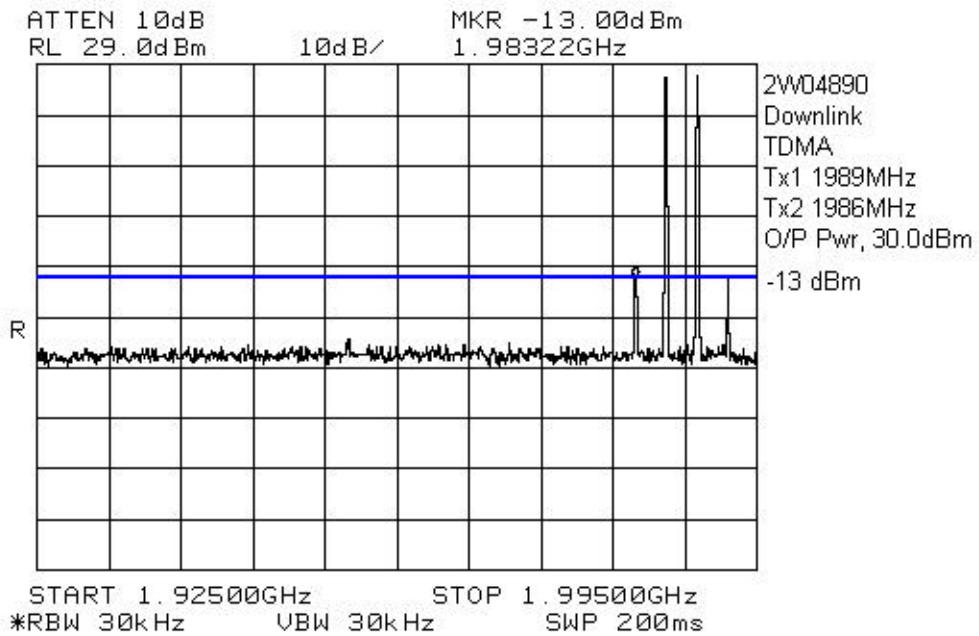
Section 5. Spurious Emissions at Antenna Terminals**Para. No.: 2.1051**

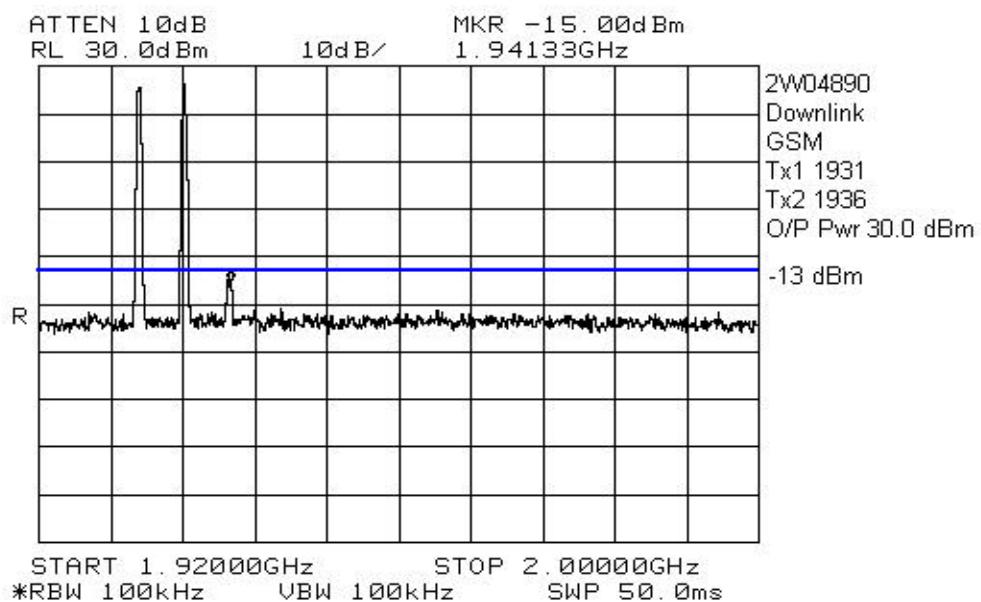
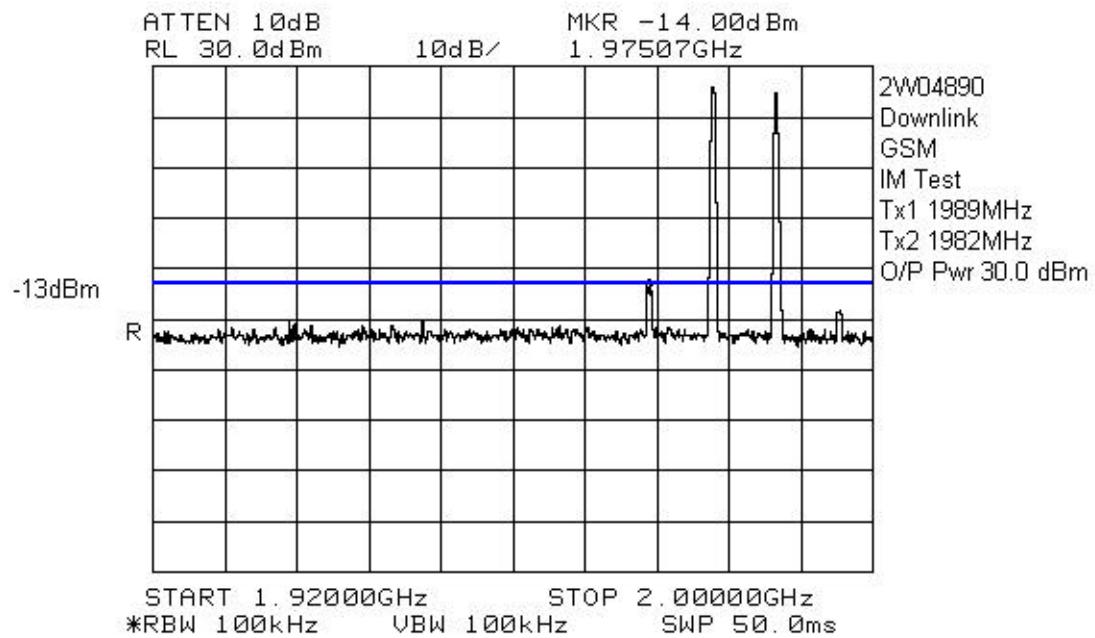
Test Performed By: Kevin Carr	Date of Test: 12 June 2002
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Minimum Standard: 24.238**Test Results:** Complied.**Measurement Data:** See Attached Graphs. Only worst case has been reported.

Spurious Emissions-Conducted



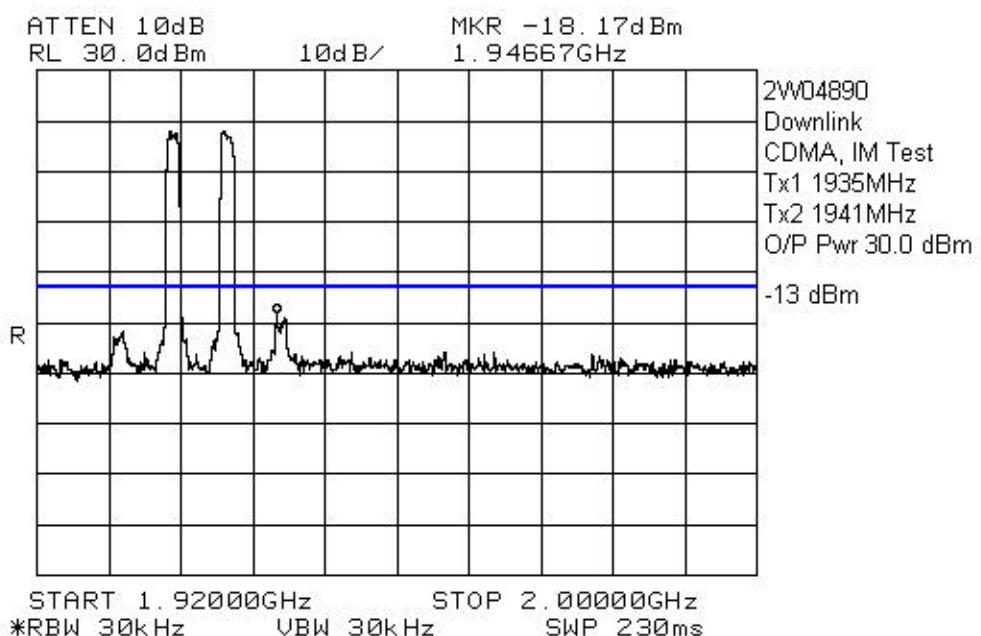
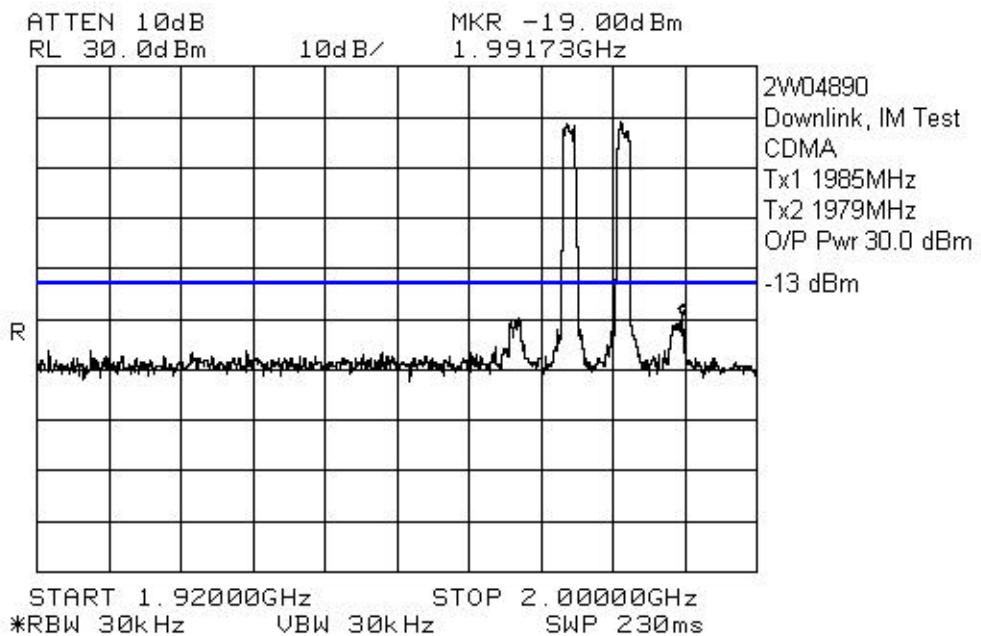
EQUIPMENT: CBDA PCSAC 10W80

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Section 6. Field Strength of Spurious Emissions

Para. No.: 2.1053

Test Performed By: Kevin Carr	Date of Test: 13 June 2002
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Minimum Standard: 24.238

Test Results: Complied.

Measurement Data: See attached data.

Test Data - Radiated Emissions

Test Distance (meters) : 3		Range: A		Receiver: HP8565E			RBW(kHz): 1000		Detector: Peak	
No.	Freq. (MHz)	Ant.	Pol (V/H)	RCVD Signal (dB μ V)	Conv. Factor (dB)**	Amp. Gain (dB)* **	Dist. Corr. (dB)	Signal Strength (dBm)	Limit (dBm)	Margin (dB)
1	3920	SSV	V	61	-117.5			-56.5	-13	43.5
2	3920	SSH	H	61.2	-117.5			-56.3	-13	43.3
3	5880	SSV	V	57.5	-110.2			-52.7	-13	39.7
4	5880	SSH	H	57.3	-107.8			-50.5	-13	37.5
5	7840	SSV	V	56.7	-102.8			-46.1	-13	33.1
6	7840	SSH	H	57.3	-102.8			-45.5	-13	32.5

Notes:

B/C = Biconical, BL = Bilog, L/P = Log-Periodic, H = Horn, D/P = Dipole, E/D = EMCO Dipole

* Re-measured using dipole antenna.

** Includes cable loss when amplifier is not used.

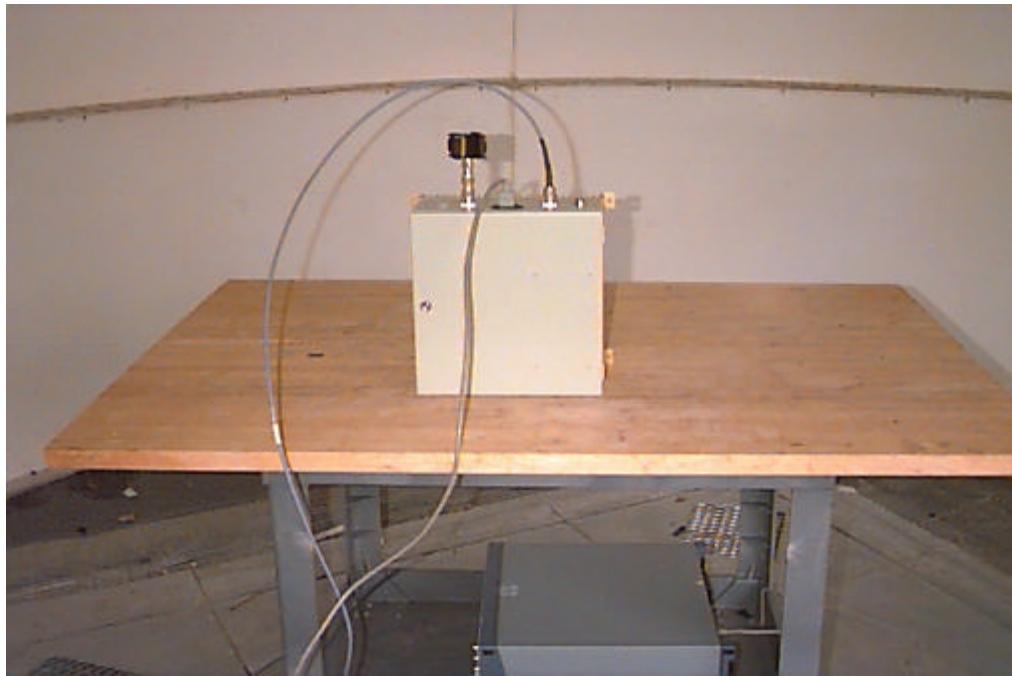
*** Includes cable loss.

() Denotes failing emission level.

N.D. = Not Detected

All spurious and harmonic emissions to the 10th harmonic for the downlink were searched.

Radiated Spurious Emissions-Photograph



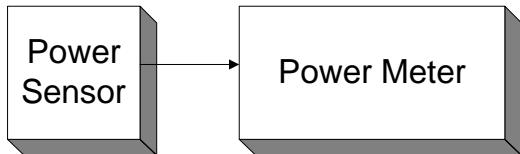
Section 7. Frequency Stability**Para. No.: 2.1055**

Test Performed By: Kevin Carr	Date of Test: 13 June 2002
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Minimum Standard: 24.235**Test Results:** Complied. The maximum frequency drift was 0Hz.**Measurement Data:** Temperature Range : -30Deg. C to 50 Deg. C, Ref. Client Documentation
Downlink, Test Frequency: 1960MHz

Section 8. Block Diagrams

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



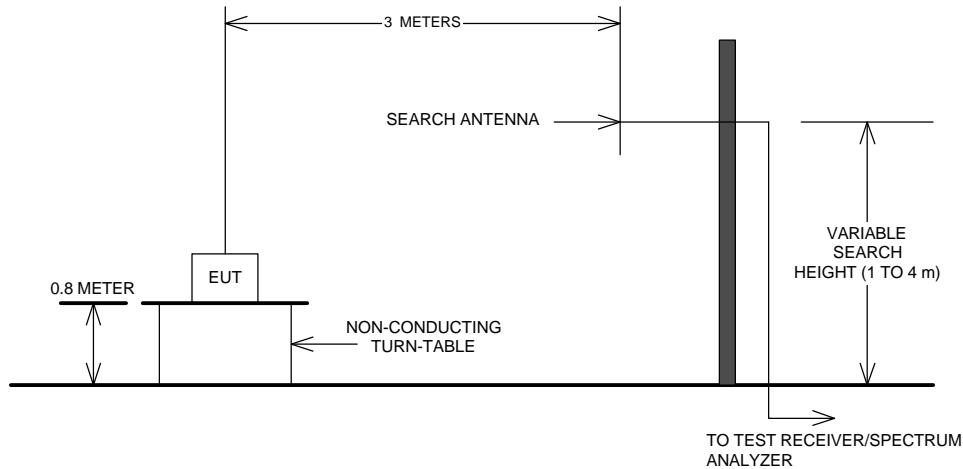
Para. No. 2.1049 - Occupied Bandwidth



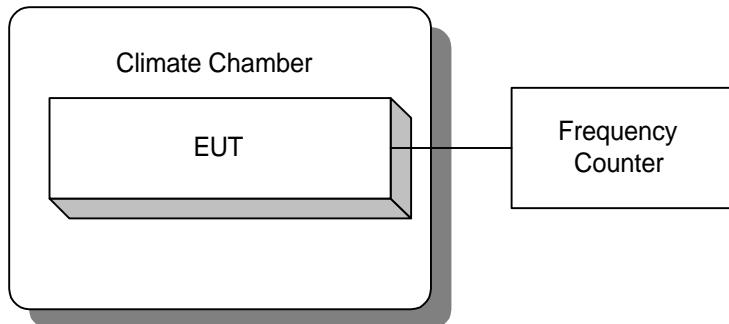
Para. No. 2.1051 - Spurious Emissions at Antenna Terminals



Para. No. 2.1053 - Field Strength of Spurious Radiation



Para. No. 2.1055 - Frequency Stability



Section 9. Test Equipment List

CAL CYCLE	EQUIPMENT	MANUFACTURER	MODEL	SERIAL	LAST CAL.	NEXT CAL.
1 Year	Spectrum Analyzer	Hewlett Packard	8564E	3846A01407	Mar. 6/02	Mar. 6/03
1 Year	Climate Chamber	Thermotron	SM-16C	15649-S	COU	COU
1 Year	Attenuator	Narda	768-20	9507	Oct. 12/00	Oct. 12/01
COU	Attenuator	Narda	768-10	9709	COU	COU
COU	Attenuator	Narda	769-20	4153	COU	COU
1 Year	Horn Antenna	EMCO #2	3115	4336	Dec. 1/01	Dec. 1/02
3 Year	Signal Generator	Rohde & Schwarz	SM1Q03	DE22004	Sept. 18/00	Sept. 18/03
3 Year	Signal Generator	Rhode & Schwarz	SM1Q03E	FA001269	Oct. 4/99	Oct. 4/02
COU	RF AMP	JCA	2-4 GHz	FA001496	COU	COU
COU	RF AMP	JCA	1-2 GHz	FA001498	COU	COU
COU	RF AMP	JCA	4-8 GHz	FA001497	COU	COU
COU	RF AMP	Narda	5 - 18GHz	FA001409	COU	COU
COU	RF AMP	Narda	18 - 26.5GHz	FA001550	COU	COU
1 Year	Frequency Counter	Hewlett Packard	HP5350A	2444A00135	11 Jan 2002	11 Jan 2003
NCR	Power Supply	Hewlett Packard	6274B	2552A-08243	NCR	NCR
1 Year	Power Meter	Hewlett Packard	E4418B	FA001413	Sept. 27/01	Sept. 27/02
COU	Isolator	Narda	IOS-1530-10W	FA001585	COU	COU
1 Year	Power Sensor	Hewlett Packard	8487A	FA001419	Sept. 27/01	Sept. 27/02

NA: Not Applicable

NCR: No Cal Required

COU: CAL On Use