



Test Report: 5W38634

Applicant: Dekolink Wireless Ltd.
16 Bazel St. Qiryat Arie
Petah Tikva, Israel
49510

**Equipment Under Test:
(EUT)** MW-CSR-ESMR-25W90-806-18

FCC ID: OIWCSRESMR25W90

In Accordance With: **FCC Part 90, Subpart I**
Private Land Mobile Repeater

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

Authorized By: 
Sim Jagpal, General Manager

Date: 2 March 2005

Total Number of Pages: 23

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EQUIPMENT: MW-CSR-ESMR-25W90-806-18

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, Subpart I.



New Submission



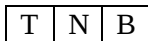
Production Unit



Class II Permissive Change



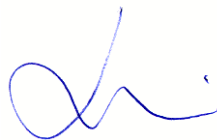
Pre-Production Unit



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: 2 March 2005

Xu Jin, Wireless Specialist

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This report applies only to the items tested.

EQUIPMENT: MW-CSR-ESMR-25W90-806-18

Summary Of Test Data

Name Of Test	Para. No.	Result
RF Power Output	2.1046	Complies
Audio Frequency Response	TIA EIA-603.3.2.6	N/A (1)
Audio Low-Pass Filter Response	TIA EIA-603.3.2.6	N/A (1)
Modulation Limiting	TIA EIA-603.3.2.6	N/A (1)
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(2)
Transient Frequency Behavior	—	

Footnotes

1. The apparatus does not modulate or demodulate the carrier and therefore does not contain any modulation circuitry.
2. This equipment uses the same LO for frequency conversion, therefore the transmitted signal is identical in frequency to the received signal. This was verified with frequency counter phase locked to a signal generator and measuring the transmitted signal frequency. The frequency drift was 0 Hz.

Indoor Temperature: 22°C
 Humidity: 23%

Outdoor Temperature: 6°C
 Humidity: 27%

EQUIPMENT: MW-CSR-ESMR-25W90-806-18

Section 2. General Equipment Specification

Manufacturer:	Dekolink Wireless Ltd.
Model No.:	MW-CSR-ESMR-25W90-18
Serial No.:	0501D033
Date Received In Laboratory:	Jan 31, 2005
Nemko Identification No.:	1
Supply Voltage Input:	110 to 220VAC
Frequency Range:	UpLink: 806-824 MHz DownLink: 851-869 MHz
Type(s) of Modulation:	iDEN(QAM)
RF Power Output (rated):	UpLink: 0.25Watts, 24dBm DownLink: 4Watts, 36dBm
Gain(rated)	UpLink: 90dB DownLink: 90dB
Emission Designator:	G7W (iDEN)

EQUIPMENT: MW-CSR-ESMR-25W90-806-18

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

Test Performed By: Xu Jin	Date of Test: Feb 23, 2005
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Minimum Standard: Para. No. 90.205(a).**Test Results:** Complies**Measurement Data:** See attached charts. The maximum RF output power is within ± 1 dB of the manufacturer's rating.**UpLink**

Channel Frequency (MHz)	Measured Power (dBm)	Rated Power (dBm)
806	23.08	24
815	24.52	24
824	23.06	24

DownLink

Channel Frequency (MHz)	Measured Power (dBm)	Rated Power (dBm)
851	35.21	36
860	35.63	36
869	35.30	36

EQUIPMENT: MW-CSR-ESMR-25W90-806-18

Section 4. Occupied Bandwidth

Para. No.: 2.1049

Test Performed By: Xu Jin	Date of Test: Feb 24, 2005
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Minimum Standard: Para. No. 90.210

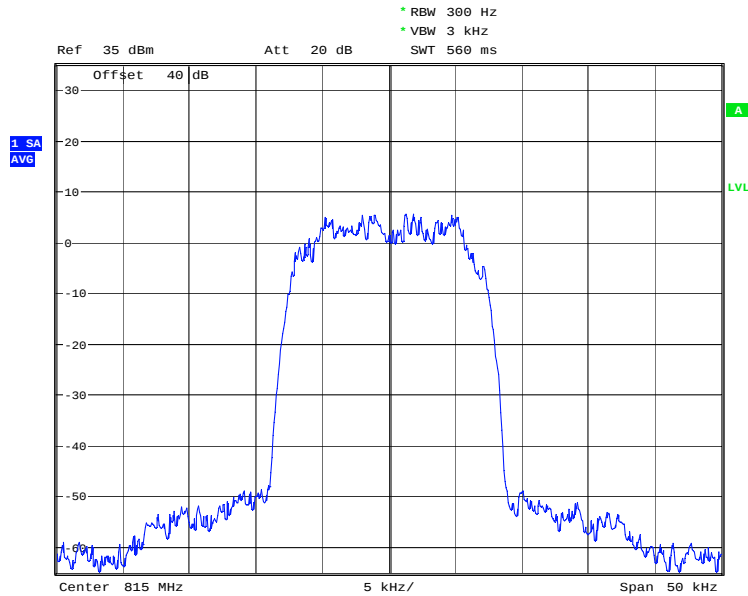
Test Results: Complies

Measurement Data: See attached graph(s).

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

EQUIPMENT: MW-CSR-ESMR-25W90-806-18

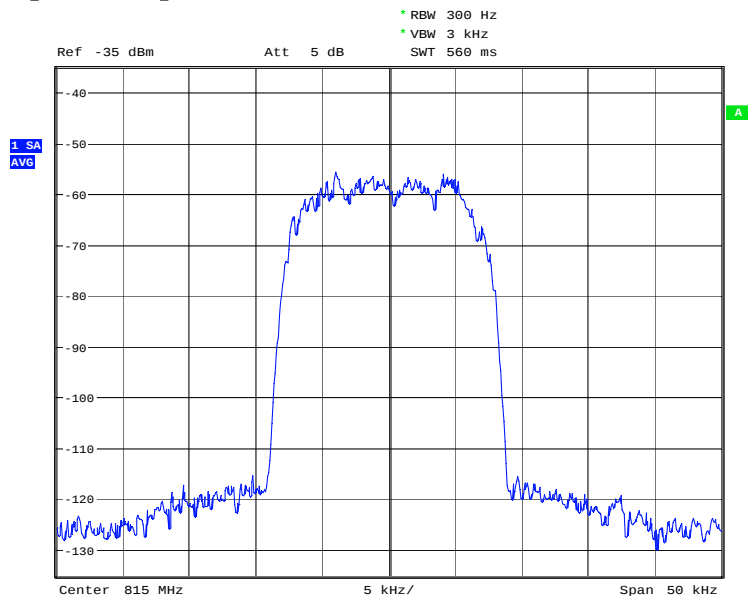
UpLink_Output



UL_O/P

Date: 24.FEB.2005 08:28:12

UpLink_Input

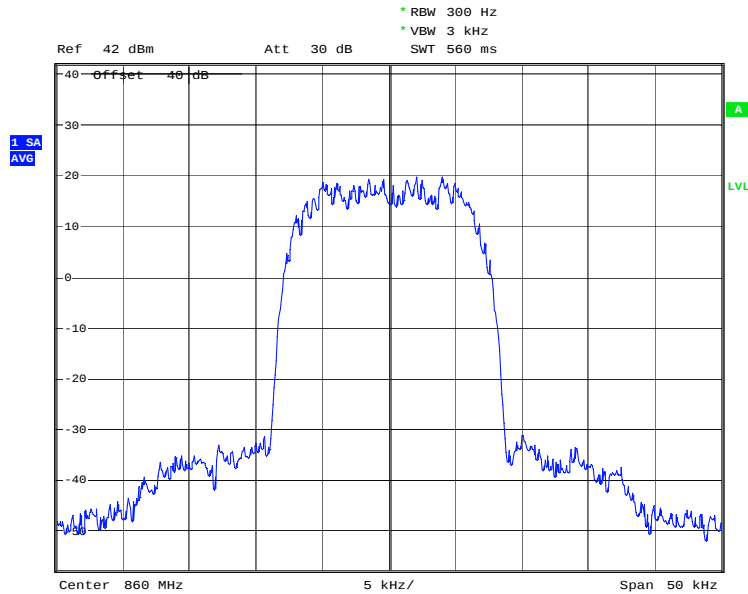


UL_I/P

Date: 24.FEB.2005 08:14:01

EQUIPMENT: MW-CSR-ESMR-25W90-806-18

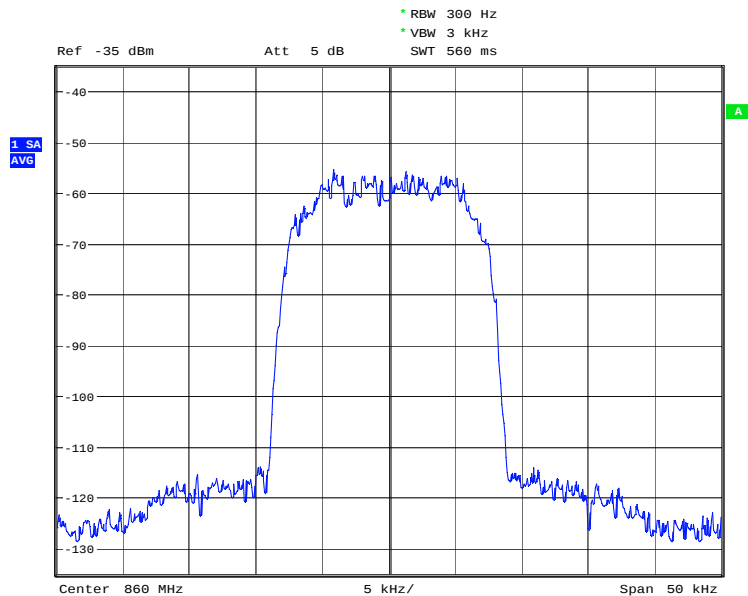
DownLink_Output



DL_0/P

Date: 24.FEB.2005 08:22:52

Downlink_Input



DL_I/P

Date: 24.FEB.2005 08:15:56

EQUIPMENT: MW-CSR-ESMR-25W90-806-18

Section 5. Spurious Emissions at Antenna Terminals

Para. No.: 2.1051

Test Performed By: Xu Jin	Date of Test: Feb 23, 2005
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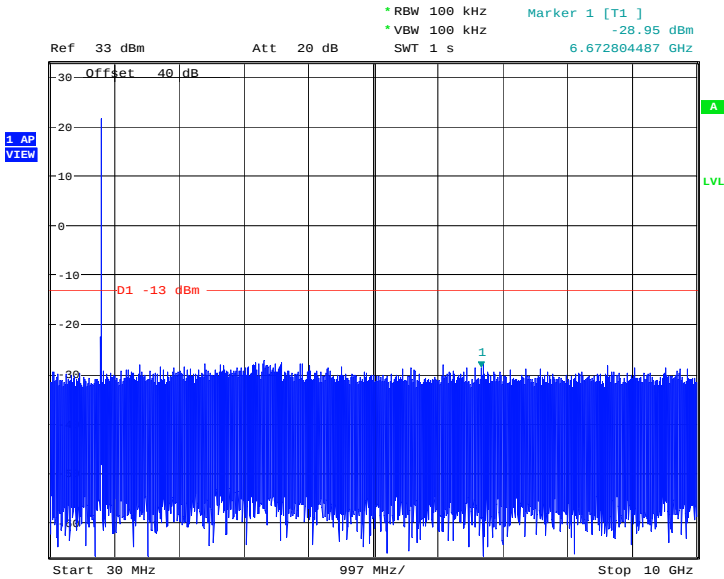
Minimum Standard: -13dBm

Test Results: Complies

Measurement Data: See attached graph(s). Worst case plots have been included.

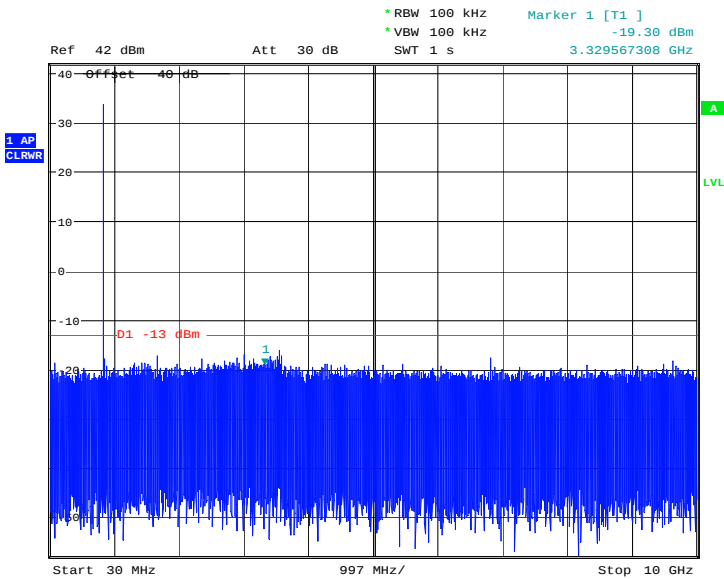
EQUIPMENT: MW-CSR-ESMR-25W90-806-18

UpLink Conducted Emissions



UL
Date: 23.FEB.2005 13:57:30

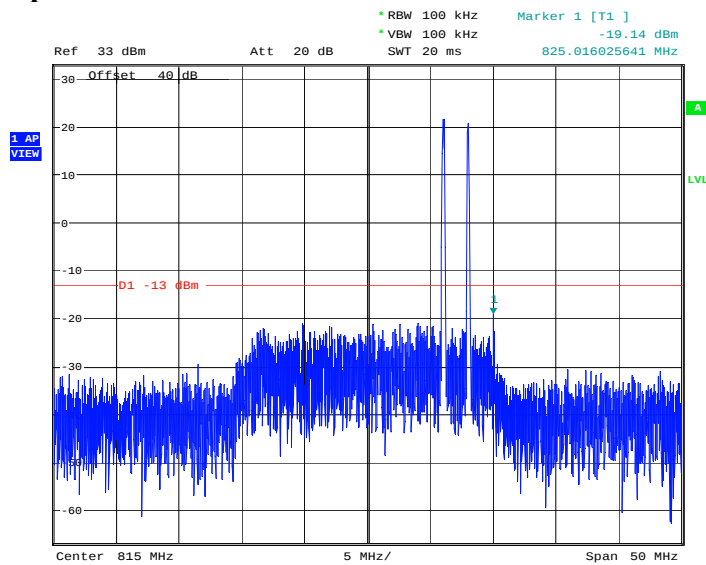
DownLink Conducted Emissions



DL
Date: 23.FEB.2005 14:22:15

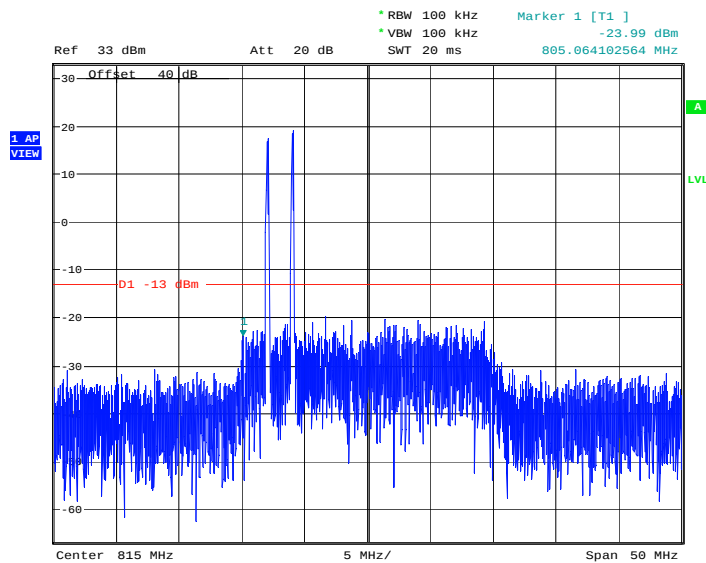
EQUIPMENT: MW-CSR-ESMR-25W90-806-18

3rd Order Inter-modulation Plots UpLink



UL_HS

Date: 23.FEB.2005 13:53:13

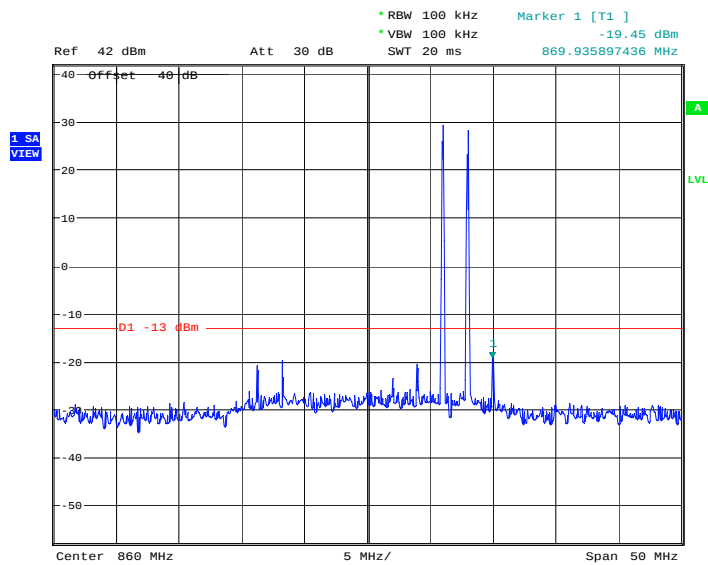


UL_LS

Date: 23.FEB.2005 13:49:19

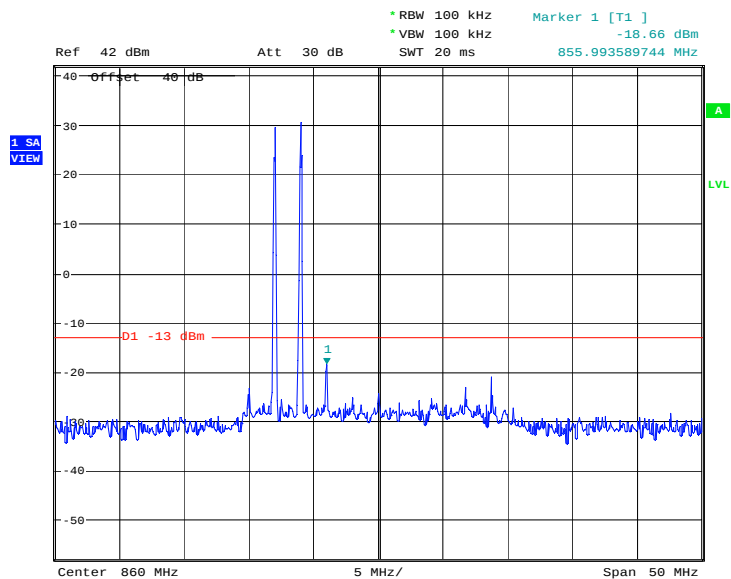
EQUIPMENT: MW-CSR-ESMR-25W90-806-18

DownLink



DL

Date: 23.FEB.2005 14:26:27



DL

Date: 23.FEB.2005 14:25:08

EQUIPMENT: MW-CSR-ESMR-25W90-806-18

Section 6. Field Strength of Spurious Emissions

Para. No.: 2.1053

Test Performed By: Xu Jin	Date of Test: Feb 24, 2005
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Minimum Standard: Para. No. 90.210

Test Results: Complies

Measurement Data: See attached graph(s).

The EUT was searched from 30MHz to the 10th harmonics and in both UL and DL directions. The worst-case results were presented.

All emissions were measured using signal substitution relative to a half wave dipole antenna and were reported as ERP.

EQUIPMENT: MW-CSR-ESMR-25W90-806-18

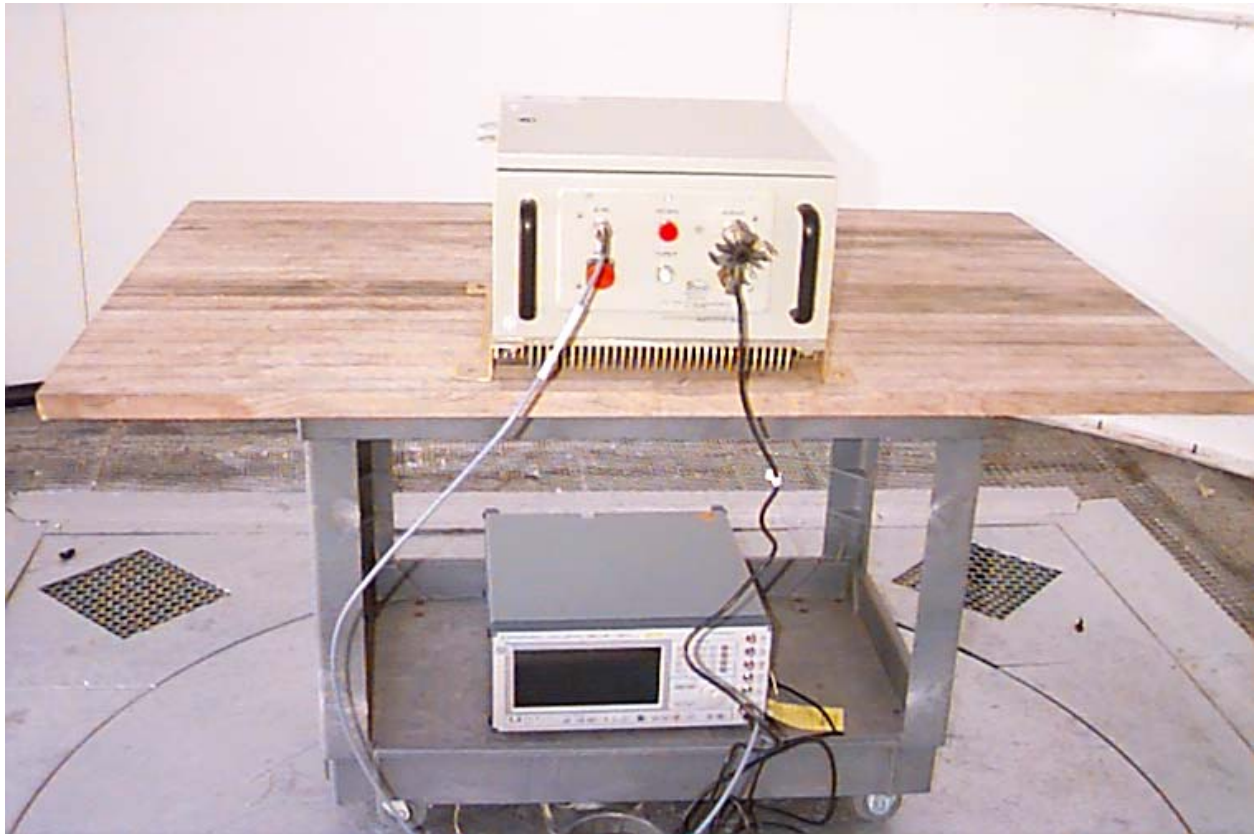
Radiated Emissions Test Data

Test Date: Feb 24, 2005								
Engineer's Name: Xu Jin								
Temperature (C°): Indoor: 22, Outdoor: 6						Humidity %: Indoor: 23 , Outdoor: 27		
Tested as per Table Top								
Test Distance (meters): 3						Range: 1		
Freq. (MHz)	Ant.	Pol. V/H	RCVD Signal (dBμV)	Sig Sub. Factor (dB)	Signal Substitution Power (dBm)	Limit (dBm)	Margin (dB)	Detector
720	LP	V	9.6	-73.3	-63.7	-13	50.7	Peak
1720	Horn	V	58.0	-117.9	-59.9	-13	46.9	Peak
2580	Horn	V	80.8	-123.9	-43.1	-13	30.1	Peak
Note 1: Antenna Legend: BC = Biconical, BL = Bilog, LP = Log-Periodic, Horn = Horn, ED = EMCO Dipole Note 2: Detector Legend: Q-Peak = 120 kHz RBW, Average = 1.0 MHz RBW								

EQUIPMENT: MW-CSR-ESMR-25W90-806-18

Radiated Emissions Setup Photos

Front View



EQUIPMENT: MW-CSR-ESMR-25W90-806-18

Rear View



EQUIPMENT: MW-CSR-ESMR-25W90-806-18

Section 7. Out of Band Rejection

Para. No.: EAB/RF-2-11-04

Test Performed By: Xu Jin	Date of Test: Feb 23, 2005
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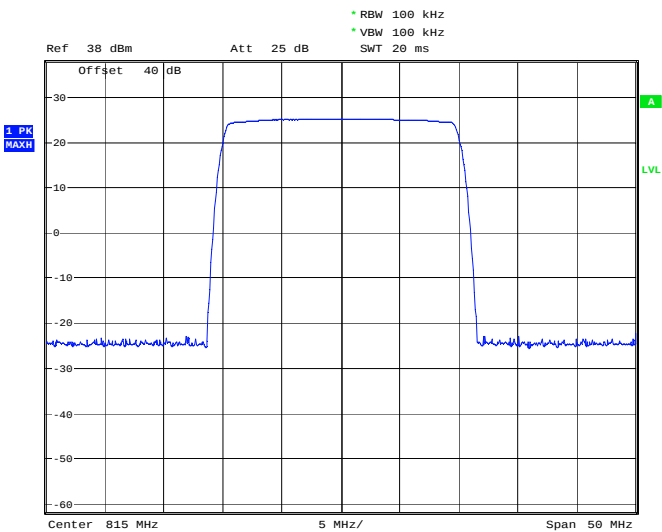
Minimum Standard: -13dBm

Test Results: Complies

Measurement Data: See attached plots.

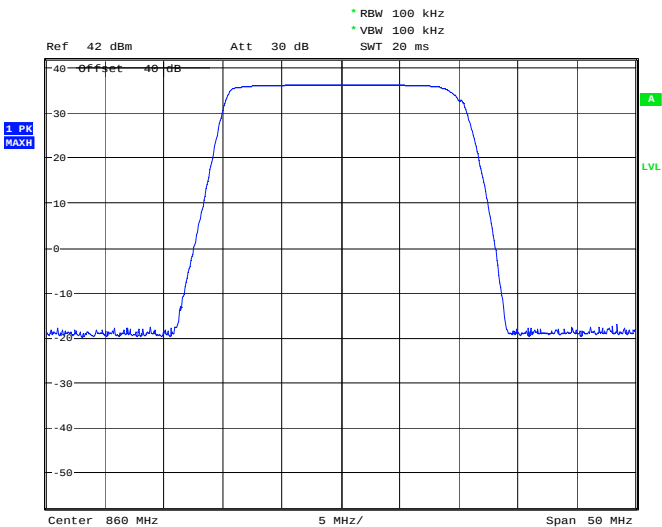
EQUIPMENT: MW-CSR-ESMR-25W90-806-18

UpLink



UL
Date: 24.FEB.2005 08:44:59

DownLink



DL
Date: 23.FEB.2005 14:47:52

*EQUIPMENT: MW-CSR-ESMR-25W90-806-18***Section 8. Test Equipment List**

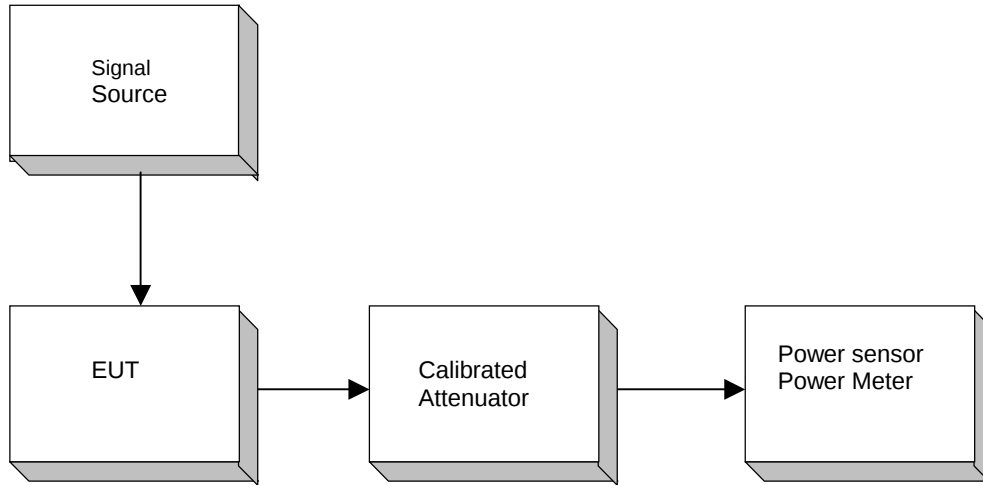
CAL Cycle	Equipment	Manufacturer	Model No.	Asset/Serial No.	Last Cal.	Next Cal.
1 Year	Spectrum Analyzer	Hewlett-Packard	8564E	3943A01798	Dec 22/04	Dec 22/05
1 Year	Spectrum Analyzer	Rohde & Schwarz	FSU	FA001877	May 26/04	May 26/05
1 Year	Horn Antenna #2	EMCO	3115	FA000825	Dec. 10/04	Dec. 10/05
1 Year	Biconical Antenna #1	EMCO	3109	FA000805	April 23/04	April 23/05
1 Year	Log Periodic Antenna #1	EMCO	LPA-25	FA000477	Aug 26/04	Aug. 26/05
1 Year	1.0 – 2.0 GHz Amplifier	JCA	12-400	FA001498	June. 18/04	June. 18/05
1 Year	2.0 – 4.0 GHz Amplifier	JCA	24-600	FA001496	June. 18/04	June. 18/05
1 Year	4.0 – 8.0 GHz Amplifier	JCA	48-600	FA001497	June. 18/04	June. 18/05
3 Year	Signal Generator	Rohde & Schwarz	SMIQ03	FA001091	April 20/04	Sept. 25/05
1 Year	Signal Generator	Rohde & Schwarz	SMIQ06B	FA001878	May 18/04	May 18/05
1 Year	Power Meter	Hewlett-Packard	E4418B	FA001413	May 25/04	May 25/05
1 Year	Power Sensor	Hewlett-Packard	8487A	Fa001908	Mar 11/04	Mar 11/05
COU	Attn	Narda.	769-20	FA001349	COU	COU
COU	Attn	Narda	776B-20	FA001153	COU	COU

Note: N/A = Not Applicable, NCR = No Cal Required, COU = CAL On Use, OUT = Out For CAL/Repair

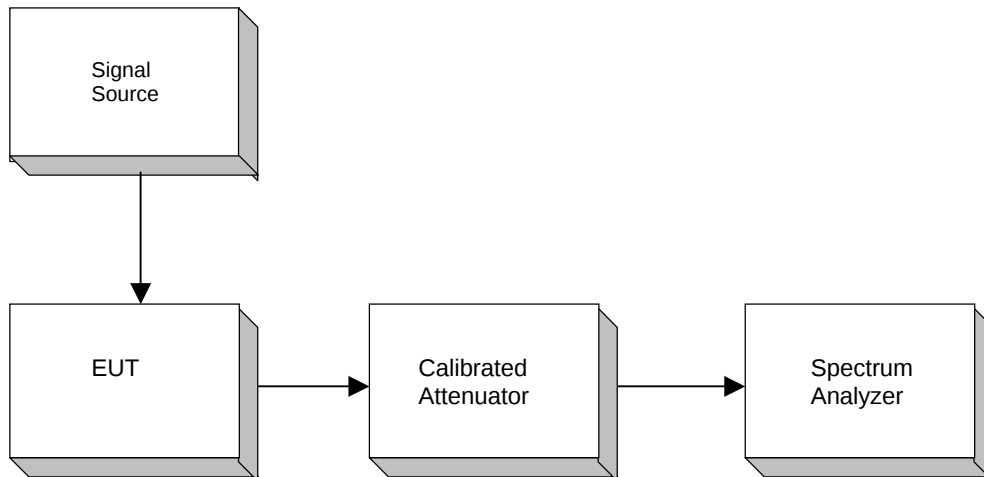
Annex A
Test Diagrams

EQUIPMENT: MW-CSR-ESMR-25W90-806-18

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

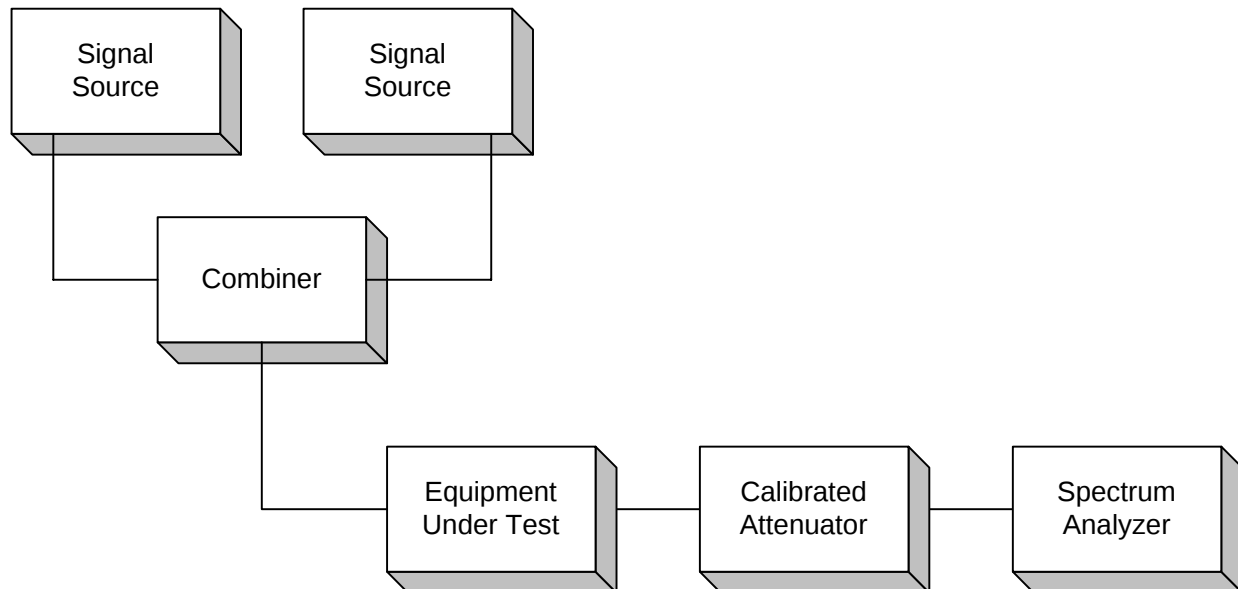


Para. No. 2.1049 - Occupied Bandwidth



EQUIPMENT: MW-CSR-ESMR-25W90-806-18

Para. No. 2.1051 - Spurious Emissions at Antenna Terminals



Para. No. 2.1053 - Field Strength of Spurious Radiation

