Standards Council of Canada
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Scope of Accreditation 75

Conseil canadien des normes
Laboratoire accrédité
Portée d'accréditation 75

TM

Test Report:	6W63307
Applicant:	Dekolink Wireless Ltd. 16 Bazel St Qiryat-Arieh Petah-Tikva Israel 49510
Apparatus:	MW-CBDA-800A-1W80-PG2
FCC ID:	OIWCBDA2PG1W80
In Accordance With:	FCC Part 90, Boosters Private Land Mobile Radio Services
Tested By:	Nemko Canada Inc. 303 River Road Ottawa, Ontario K1V 1H2
Authorized By:	Jin Xu, Wireless Specialist
Date:	April 12, 2006
Total Number of Pages:	27

Report Summary

These tests were conducted on a sample of the equipment for the purpose of demonstrating compliance with Part 90. Conducted measurements were performed in accordance with ANSI TIA-603-B-2002. Radiated tests were conducted is accordance with ANSI C63.4-2003. Radiated emissions are made on an open area test site. A description of the test facility is on file with the FCC.

The assessment summary is as follows:

Apparatus Assessed:	MW-CBDA-800A-1W80-PG2
Specification:	FCC Part 90 Private Land Mobile Radio Services
Compliance Status:	Complies
Exclusions:	None
Non-compliances:	None
Report Release History:	Original Release

Author: Jason Nixon, Telecom Specialist

Note that the results contained in this report relate only to the items tested and were obtained in the period between the date of initial receipt of samples and the date of issue of the report.

This test report has been completed in accordance with the requirements of ISO/IEC 17025.

TABLE OF CONTENTS

Section 1 : Equipment Under Test

1.1 Product Identification

The Equipment Under Test was identified as follows:

MW-CBDA-800A-1W80-PG2

1.2 Samples Submitted for Assessment

The following samples of the apparatus have been submitted for type assessment:

Sample No.	Description	Serial No.
1	MW-CBDA-800A-1W80-PG2	06023622

The first samples were received on: March 17, 2006

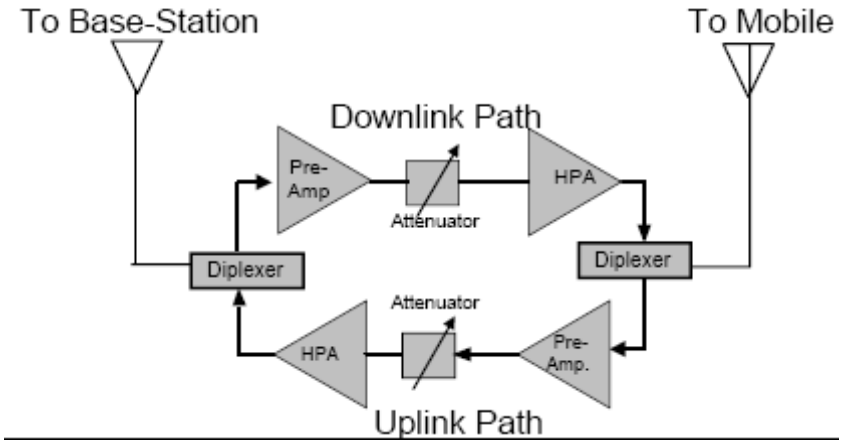
1.3 Theory of Operation

The MW-CBDA-800A-1W80-PG2 is a bi-directional amplifier. The Signal received at the Base Antenna is amplifier and transmitter at the Mobile antenna and the signals at the Mobile antenna are amplified and transmitted via the Base antenna.

1.4 Technical Specifications of the EUT

Manufacturer:	Dekolink Wireless Ltd.
Operating Frequency:	Downlink: 929-942MHz Uplink: 898-904MHz
Emission Designator:	F1D
Rated Power:	Downlink: 24dBm Uplink: 24dBm
Measured Power:	Downlink: 23.62dBm Uplink: 23.93dBm
Modulation:	4FSK
Power Source:	120VAC 60Hz

1.5 Block Diagram of the EUT



Section 2 : Test Conditions

2.1 Specifications

The apparatus was assessed against the following specifications:

FCC Part 2 Subpart J, Equipment Authorization Procedures
FCC Part 90 Private Land Mobile Radio Services
FCC 2-11-04/EAB/RF Amplifier, Booster, and Repeater Reminder Sheet

2.2 Deviations From Laboratory Test Procedures

No deviations were made from laboratory test procedures.

2.3 Test Environment

All tests were performed under the following environmental conditions:

Temperature range	:	15 – 30 ^{o}C
Humidity range	:	20 - 75 %
Pressure range	:	86 - 106 kPa
Power supply range	:	+/- 5% of rated voltages

2.4 Test Equipment

Equipment	Manufacturer	Model No.	Asset/Serial No.	Next Cal.
Spectrum Analyzer	Rohde & Schwarz	FSP	FA001920	March 17/07
Signal Generator	Rohde & Schwarz	SMIQ03	FA001091	Sept. 25/06
Signal Generator	Rohde & Schwarz	SMIQ06B	FA001878	June 10/06
Power Meter	HP	E4418B	FA001413	May 17/06
Power Sensor	HP	8487A	FA001741	May 26/06
Combiner	Mini-circuits	ZA3PD-2	FA001155	COU
Attenuator	Narda	769-20	FA001394	COU
Attenuator	Narda	776B-20	FA001153	COU
Biconical (1) Antenna	EMCO	3109	FA000805	April 22/06
Log Periodic Antenna #1	EMCO	LPA-25	FA000477	Aug. 29/06
Horn Antenna #1	EMCO	3115	FA000649	Jan. 12/07
1.0 – 2.0 GHz Amplifier	JCA	12-400	FA001498	July 14/06
2.0 – 4.0 GHz Amplifier	JCA	24-600	FA001496	July 14/06
4.0 – 8.0 GHz Amplifier	JCA	48-600	FA001497	July 14/06
5.0 – 18.0 GHz Amplifier	NARDA	DWT-186N23U40	FA001409	COU

COU – Cal On Use

Section 3 : Observations

3.1 Modifications Performed During Assessment

No modifications were performed during assessment.

3.2 Record Of Technical Judgements

No technical judgements were made during the assessment.

3.3 EUT Parameters Affecting Compliance

The user of the apparatus could not alter parameters that would affect compliance.

3.4 Test Deleted

No Tests were deleted from this assessment.

3.5 Additional Observations

There were no additional observations made during this assessment.

Section 4 : Results Summary

This section contains the following:

FCC Part 90 : Test Results

The column headed 'Required' indicates whether the associated clauses were invoked for the apparatus under test. The following abbreviations are used:

N	No : not applicable / not relevant.
Y	Yes : Mandatory i.e. the apparatus shall conform to these tests.
N/T	Not Tested, mandatory but not assessed. (See section 3.4 Test deleted)

The results contained in this section are representative of the operation of the apparatus as originally submitted.

4.1 FCC Part 90: Test Results

Clause	Test Method	Test Description	Required	Result
90.205	2.1046	Output power	Y	PASS
90.210	2.1051	Conducted spurious emissions	Y	PASS
90.210	2.1053	Radiated spurious emissions	Y	PASS
90.213	2.1055	Frequency stability	N (1)	
90.214	—	Transient Behavior	N	
90.219	—	Use of boosters	Y	PASS
2-11-04/EAB/RF	2.1049	Occupied bandwidth	Y	PASS
2-11-04/EAB/RF	—	Out of band rejection	Y	PASS

Notes:
1) The EUT does not contain any frequency translating circuitry.

Appendix A : Test Results

Clause 90.205 Output Power

Applicants for licenses must request and use no more power than the actual power necessary for satisfactory operation. Except where otherwise specifically provided for, the maximum power that will be authorized for new stations authorized after August 16, 1995 is as follows in FCC Part 90.205(a) through (r).

Test Conditions:

Sample Number:	1	**Temperature:**	25
Date:	March 27, 2006	**Humidity:**	10
Modification State:	0	**Tester:**	Jason Nixon
		Laboratory:	Wireless

Test Results:

Band	Rated Power (dBm)	Measured Power (dBm)
Uplink	24	23.93
Downlink	24	23.62

Clause 90.210 Conducted Spurious Emissions

Except as indicated elsewhere in this part, transmitters used in the radio services governed by this part must comply with the emission masks outlined in this section. Unless otherwise stated, per paragraphs (d)(4), (e)(4), and (m) of this section, measurements of emission power can be expressed in either peak or average values provided that emission powers are expressed with the same parameters used to specify the unmodulated transmitter carrier power. For transmitters that do not produce a full power unmodulated carrier, reference to the unmodulated transmitter carrier power refers to the total power contained in the channel bandwidth. Unless indicated elsewhere, the Table below specifies the emission masks for equipment operating in the frequency bands governed under this part.

Test Conditions:

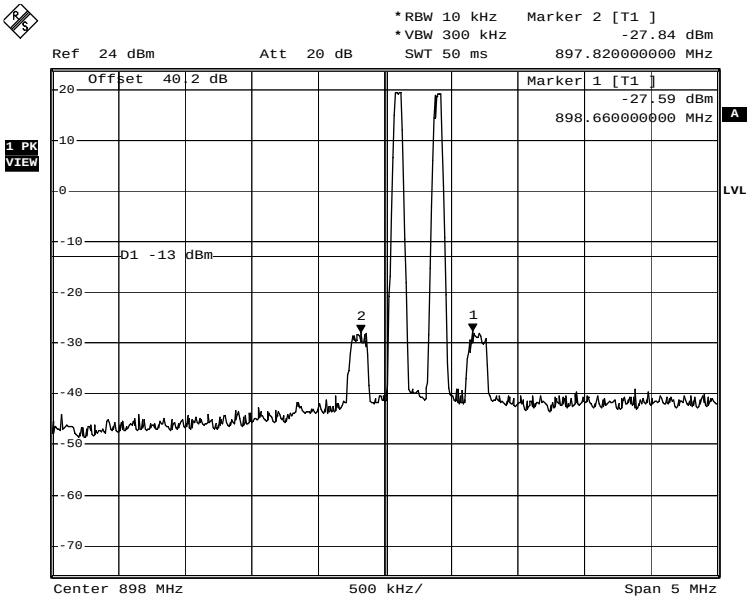
Sample Number:	1	**Temperature:**	25
Date:	March 27, 2006	**Humidity:**	10
Modification State:	0	**Tester:**	Jason Nixon
		Laboratory:	Wireless

Test Results:

See Attached Plots.

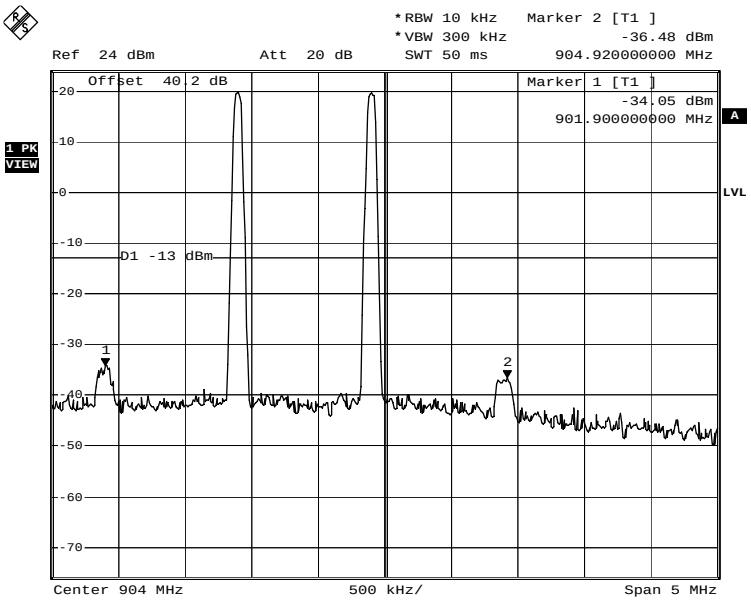
Additional Observations:

Uplink:
3rd Order Intermodulation



4FSK 3rd order Intermodulation - Lower Bandedge - Uplink

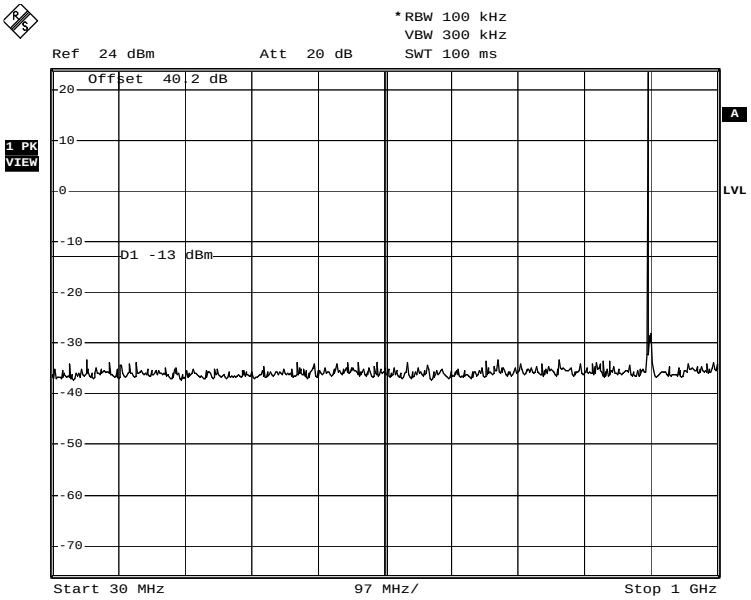
Date: 27.MAR.2006 22:22:03



4FSK 3rd order Intermodulation - Upper Bandedge - Uplink

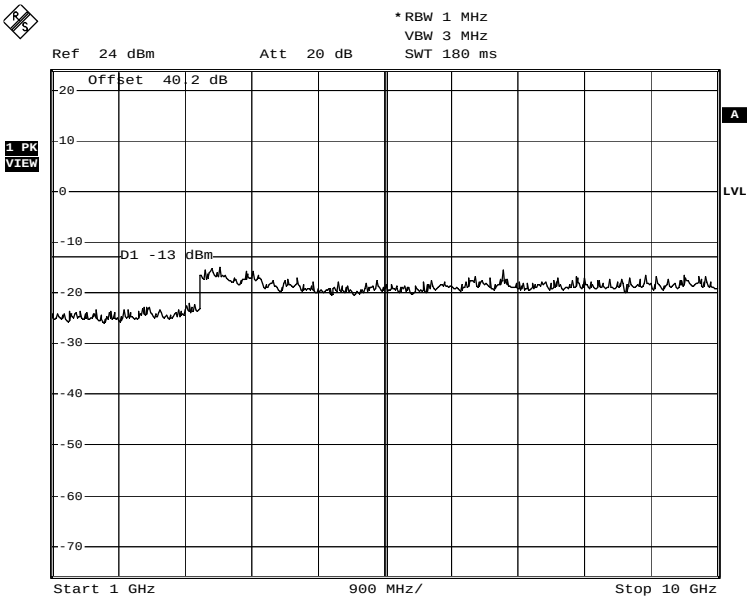
Date: 27.MAR.2006 22:18:32

Conducted Emissions:
Low Channel



Low Channel Conducted Emissions - Low Frequencies - Uplink

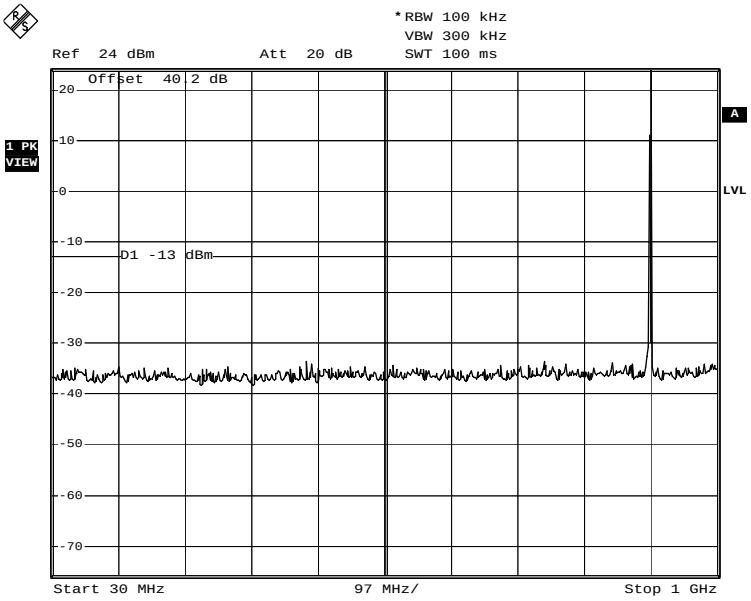
Date: 27.MAR.2006 22:05:30



Low Channel Conducted Emissions - High Frequencies - Uplink

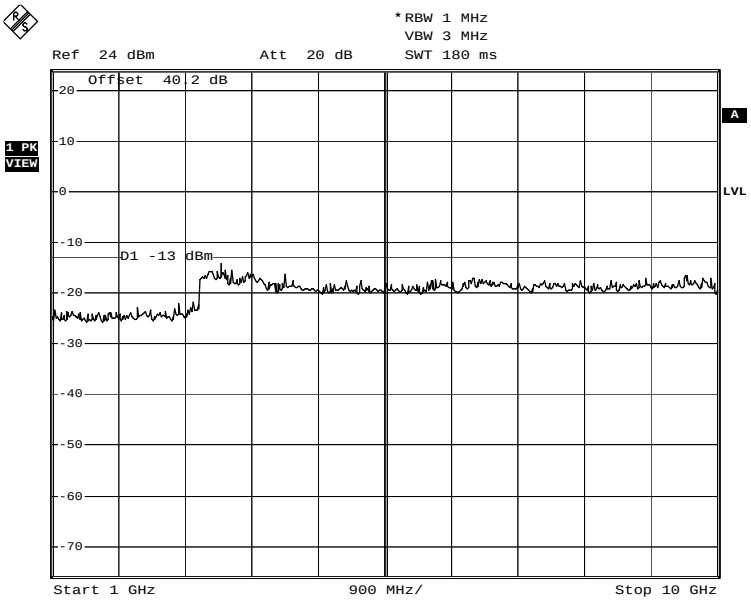
Date: 27.MAR.2006 22:04:40

Mid Channel:



Mid Channel Conducted Emissions - Low Frequencies - Uplink

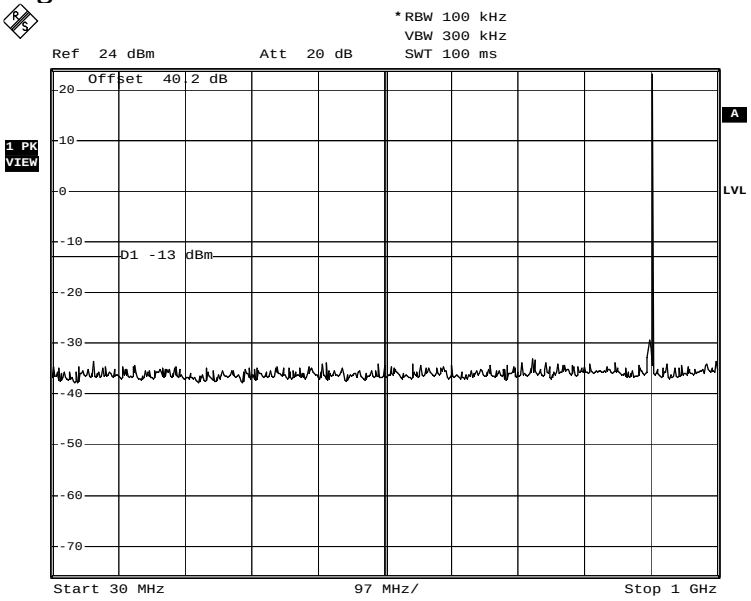
Date: 27.MAR.2006 21:59:42



Mid Channel Conducted Emissions - High Frequencies - Uplink

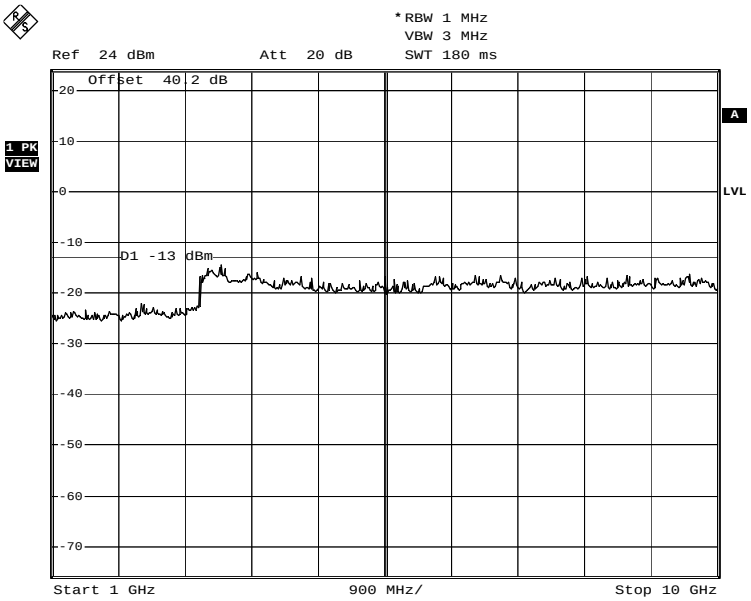
Date: 27.MAR.2006 22:02:32

High Channel:



High Channel Conducted Emissions - Low Frequencies - Uplink

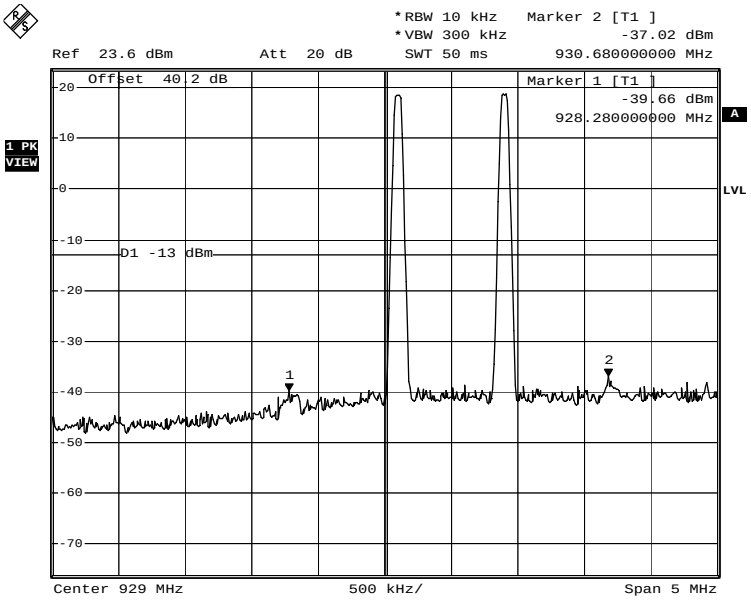
Date: 27.MAR.2006 22:07:11



High Channel Conducted Emissions - High Frequencies - Uplink

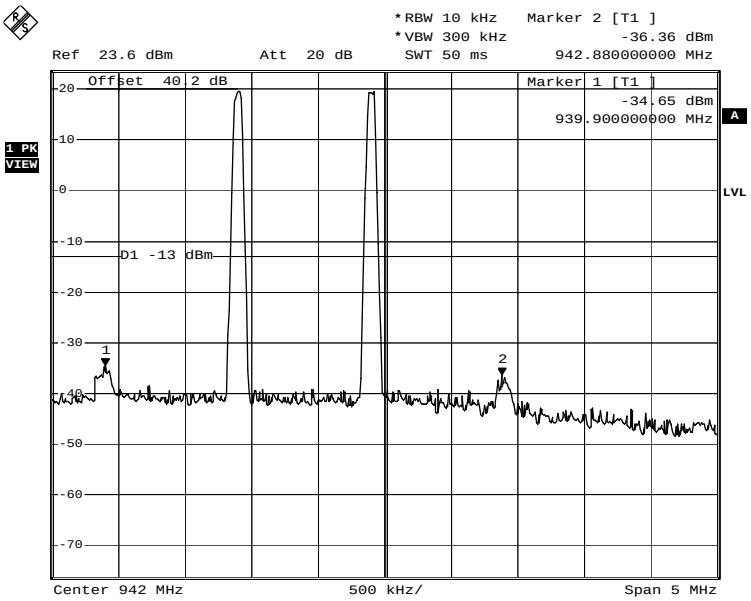
Date: 27.MAR.2006 22:08:08

Downlink:
3rd Order Intermodulation



3rd order intermodulations - downlink

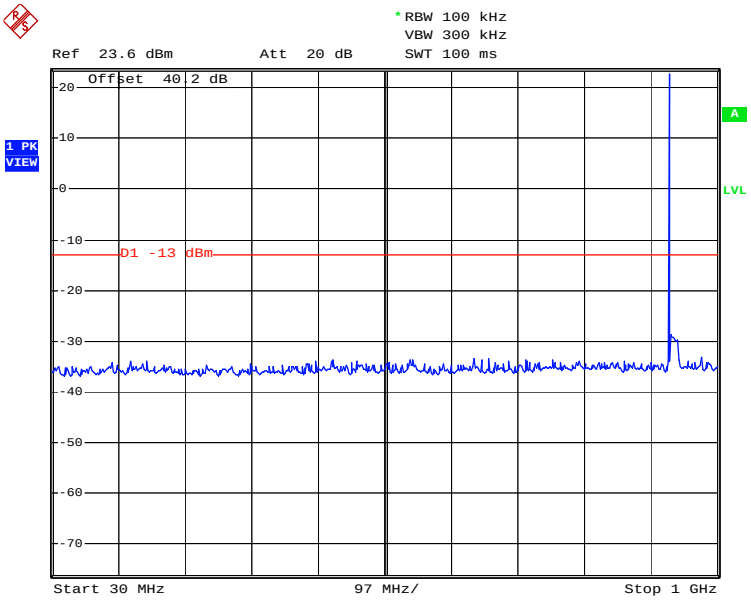
Date: 28.MAR.2006 21:15:53



3rd order intermodulations - downlink

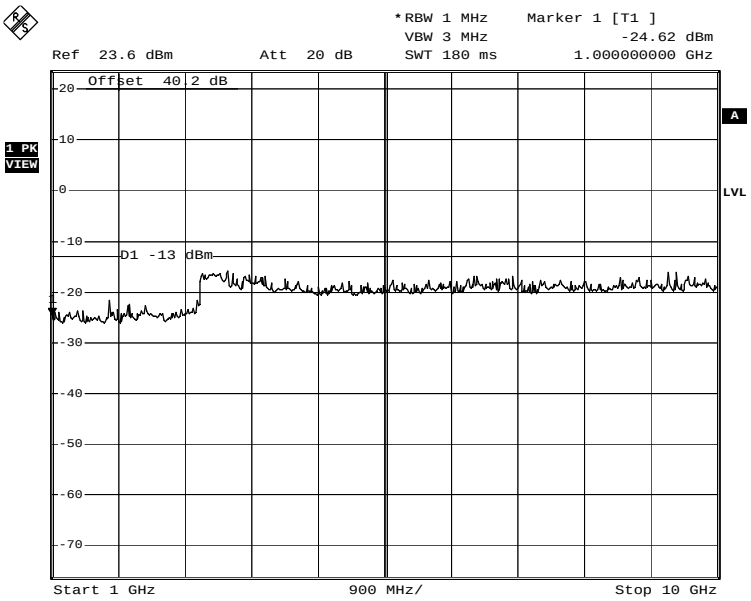
Date: 28.MAR.2006 21:18:05

Conducted Emissions:
Low Channel



Conducted Emissions Low Channel

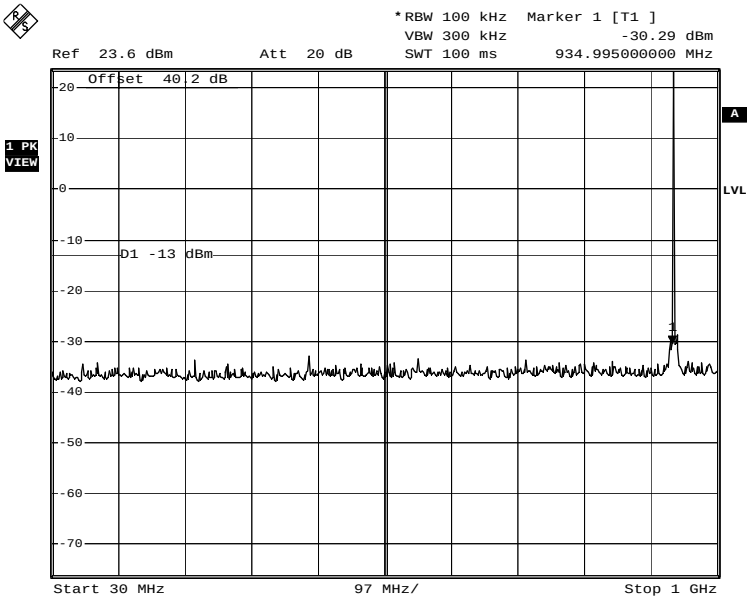
Date: 29.MAR.2006 17:16:52



Conducted Emissions Low Channel

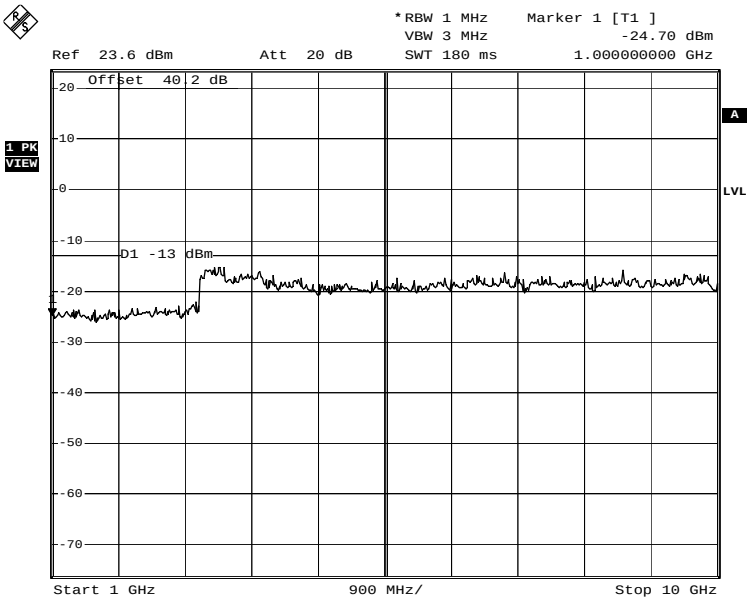
Date: 28.MAR.2006 22:43:47

Mid Channel



Conducted Emissions Mid Channel

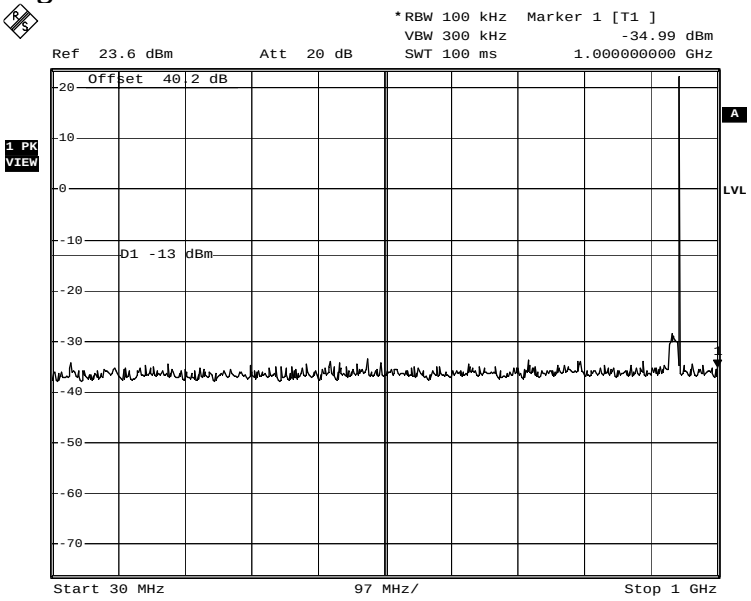
Date: 28.MAR.2006 22:08:10



Conducted Emissions Mid Channel

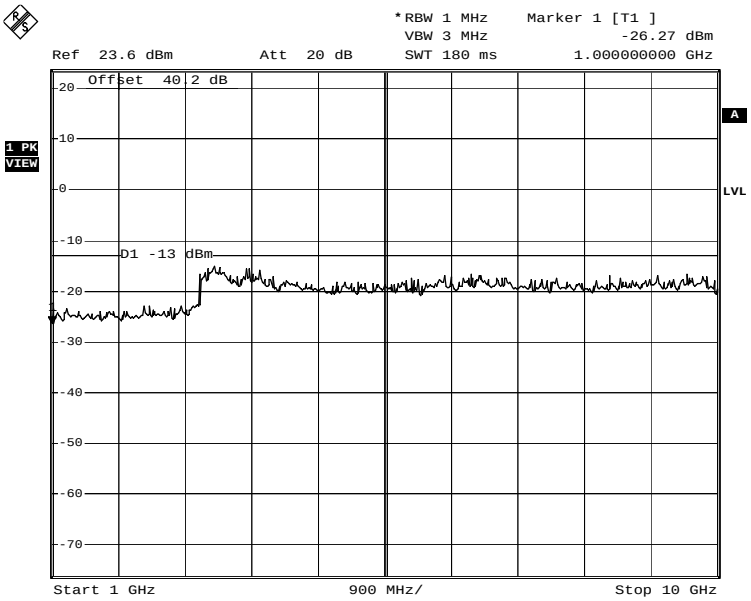
Date: 28.MAR.2006 22:09:52

High Channel



Conducted Emissions High Channel

Date: 28.MAR.2006 22:12:54



Conducted Emissions High Channel

Date: 28.MAR.2006 22:11:25

Clause 90.210 Radiated Spurious Emissions

Except as indicated elsewhere in this part, transmitters used in the radio services governed by this part must comply with the emission masks outlined in this section. Unless otherwise stated, per paragraphs (d)(4), (e)(4), and (m) of this section, measurements of emission power can be expressed in either peak or average values provided that emission powers are expressed with the same parameters used to specify the unmodulated transmitter carrier power. For transmitters that do not produce a full power unmodulated carrier, reference to the unmodulated transmitter carrier power refers to the total power contained in the channel bandwidth. Unless indicated elsewhere, the Table below specifies the emission masks for equipment operating in the frequency bands governed under this part.

Test Conditions:

Sample Number:	1	**Temperature:**	13
Date:	March 29, 2006	**Humidity:**	45
Modification State:	0	**Tester:**	Jason Nixon
		Laboratory:	OATS

Test Results:

No Emissions were detected within 20dB below the limit.

Additional Observations:

The Spectrum was searched from 30MHz to the 10GHz.

All measurements were performed using a Peak Detector with 100kHz RBW/VBW below 1GHz and a 1MHz RBW/VBW above 1GHz at a distance of 3 meters.

Clause 2-11-04/EAB/RF Occupied Bandwidth

Using an RBW of 300Hz or 1% of the emission bandwidth, The spectral shape of the output should look similar to the input for all modulations.

Test Conditions:

Sample Number:	1	**Temperature:**	25
Date:	March 27, 2006	**Humidity:**	10
Modification State:	0	**Tester:**	Jason Nixon
		Laboratory:	Wireless

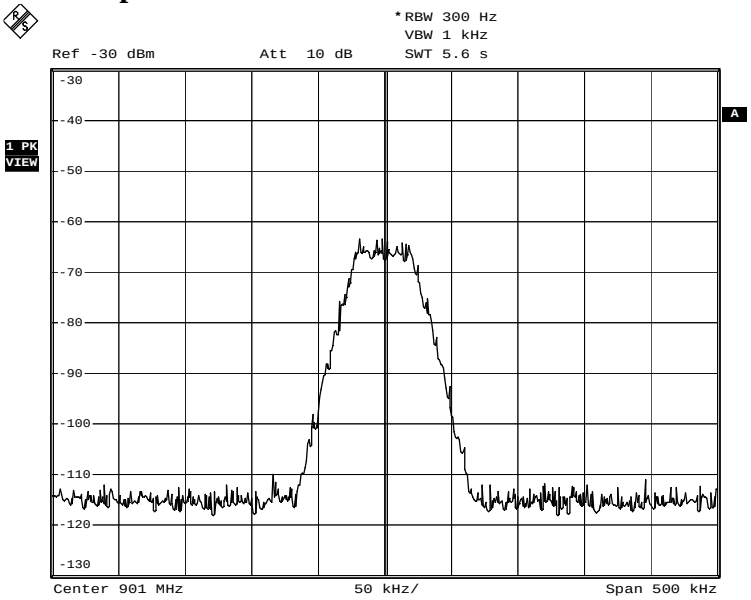
Test Results:

See Attached Plots.

Additional Observations:

Uplink:

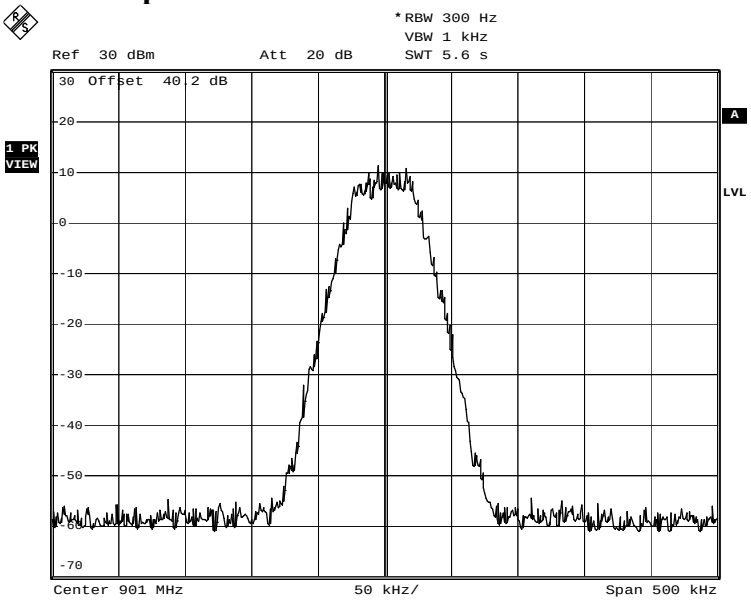
4FSK Input



4FSK Input - Uplink

Date: 27.MAR.2006 20:41:51

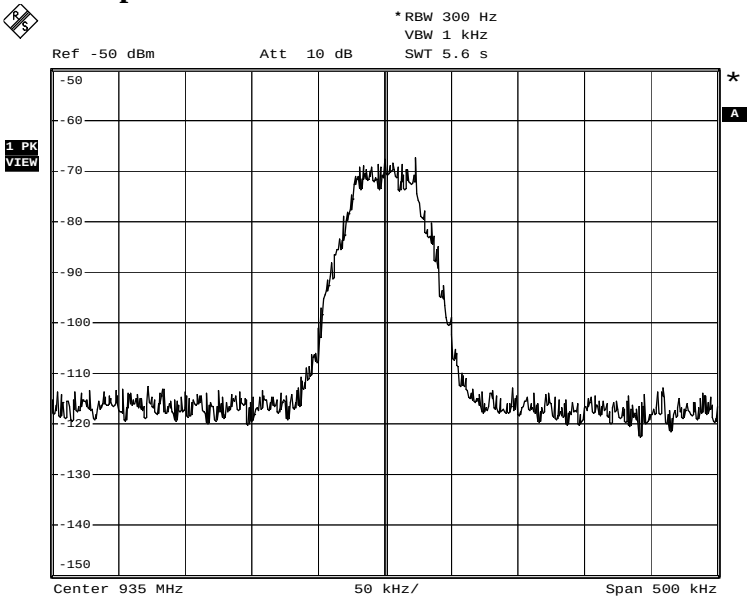
4FSK Output



4FSK Output - Uplink

Date: 27.MAR.2006 20:39:47

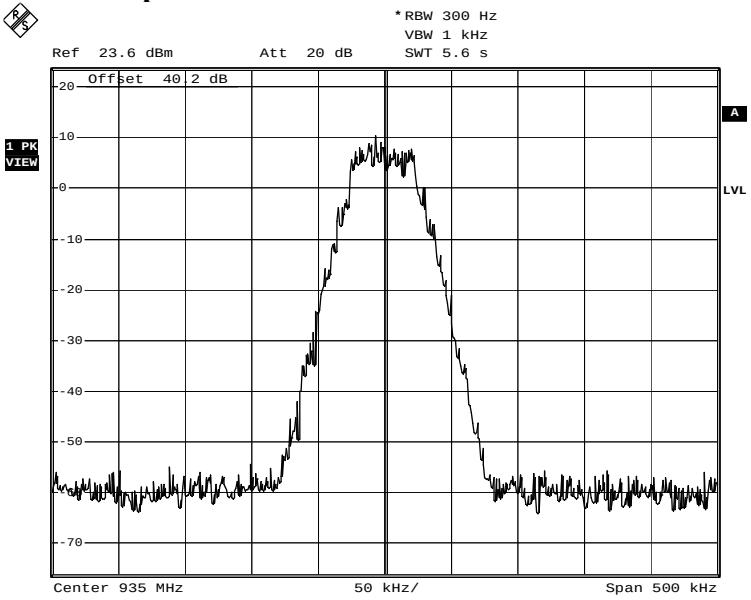
Downlink:
4FSK Input



Occupied Bandwidth - downlink

Date: 28.MAR.2006 21:53:25

4FSK Output



Occupied Bandwidth - downlink

Date: 28.MAR.2006 21:51:23

Clause 2-11-04/EAB/RF Out of Band Rejection

Plots showing the filter frequency response.

Test Conditions:

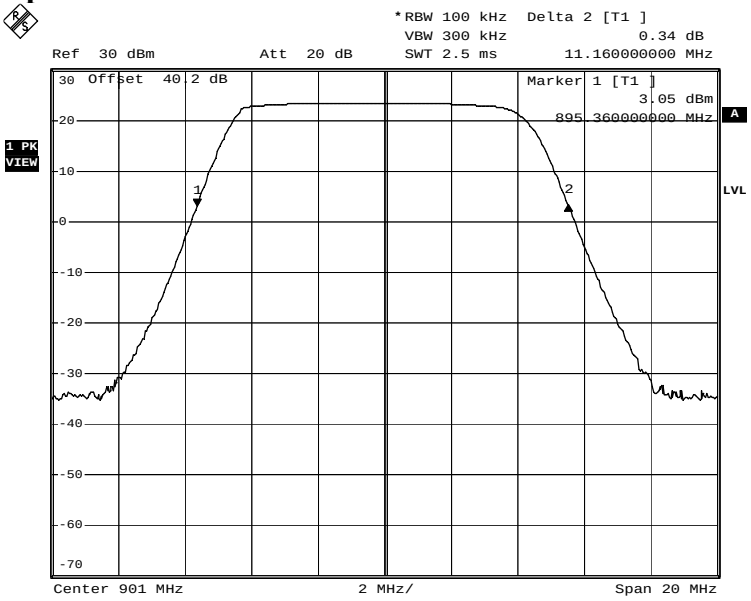
Sample Number:	1	**Temperature:**	25
Date:	March 27, 2006	**Humidity:**	10
Modification State:	0	**Tester:**	Jason Nixon
		Laboratory:	Wireless

Test Results:

See Attached Plots.

Additional Observations:

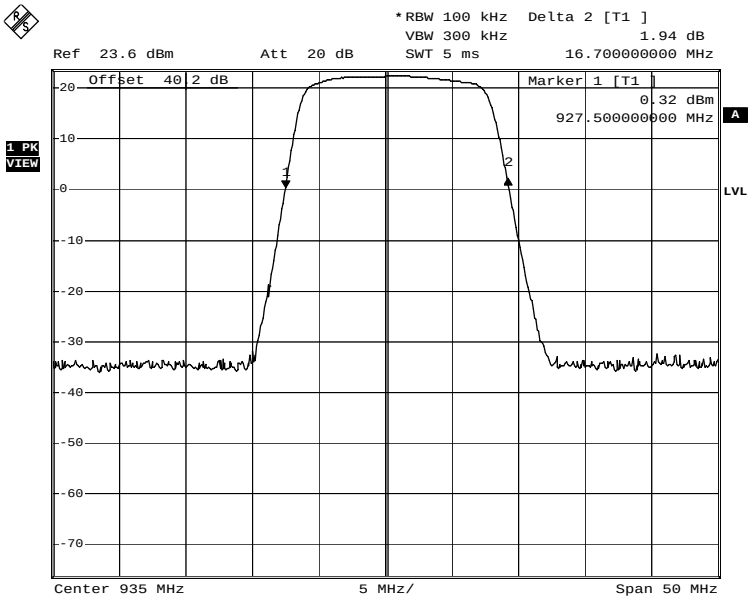
Uplink:



Out of Band Rejection - Uplink

Date: 27.MAR.2006 21:01:17

Downlink:



Occupied Bandwidth - downlink

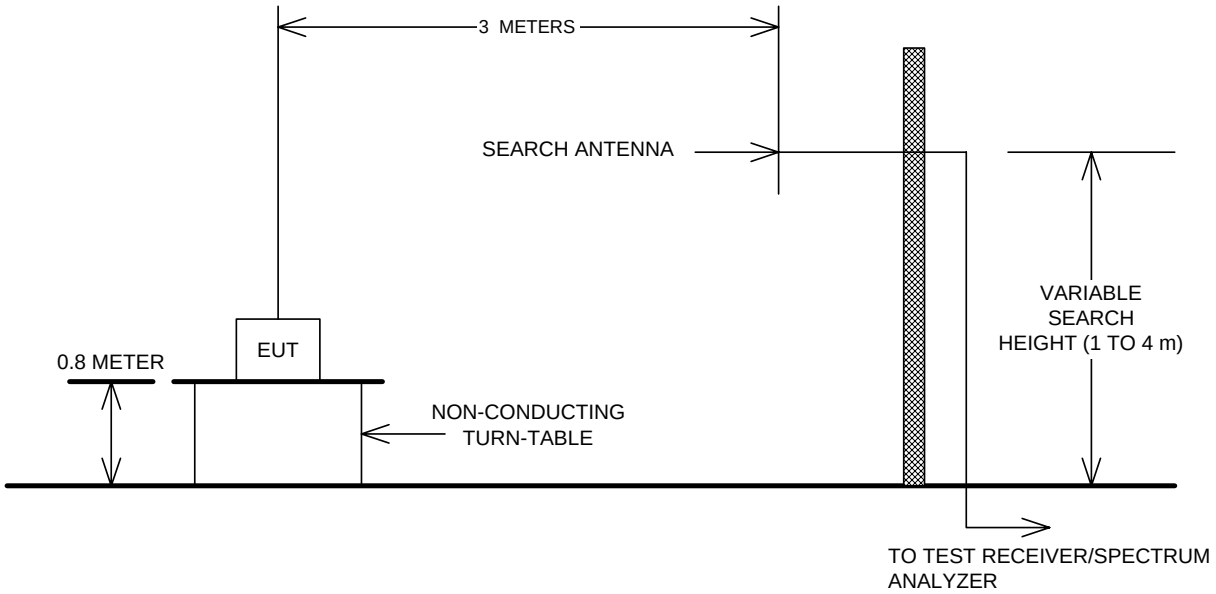
Date: 28.MAR.2006 21:29:03

Appendix B : Setup Photographs

Radiated Spurious Emissions Setup:

Appendix C : Block Diagram of Test Setups

Test Site For Radiated Emissions



Conducted Emissions, Output power, Occupied Bandwidth and Out of Band Rejection