Measurement of RF Interference from a Beckwith Electric Model MD2911Transciever ISM Band (2400 to 2483.5MHz) using the Pacific Wireless, Model OD-24-9 Omni-directional Antenna and Model PMANT-19-HD-PF1 Parabolic Grid Antenna

For : Beckwith Electric
Largo FL

P.O. No. : 34038
Date Received : April 16, 2004
Date Tested : April 19 and 21, 2004
Test Personnel : Richard E. King
Specification : FCC "Code of Federal Regulations" Title 47 Part 15.247, Subpart C

Test Report By : Richard E. King

Richard E. King
EMC Engineer

Witnessed by :

Mike Mosele
Beckwith Electric

Approved By : Raymond J. Klouda

Raymond J. Klouda
Registered Professional Engineer of Illinois - 44894

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WRITTEN APPROVAL OF ELITE ELECTRONIC ENGINEERING INCORPORATED.

Measurement of RF Emissions from a Beckwith Electric MD2911 Transciever

1.0 INTRODUCTION:

1.1 Description of Test Item - This document presents the results of tests performed to determine if the Beckwith Electric Model MD2911Transceiver (ISM Band) would meet the FCC requirements when using the Pacific Wireless Model OD-24-9 omni-directional antenna with both a 29 foot length of Times Microwave LMR-400 communications cable and a 4 foot length of Times Microwave LMR-195 communications cable and the Pacific Wireless Model PMANT-19-HD-PF1 Parabolic Grid antenna with both a 29 foot length of Times Microwave LMR-400 communications cable and a 4 foot length of Times Microwave LMR-195 communications cable. The transceiver designed to transmit at 2451MHz in the ISM band. The tests were performed for Beckwith Electric, of Largo Florida.

1.2 Purpose - The test series was performed to determine if the test item continues to meet the radiated RF emission requirements of the FCC "Code of Federal Regulations" Title 47, Part 15, Subpart C, Sections for Intentional Radiators when tested with the antennas and cables listed above. Testing was performed in accordance with ANSI C63.4-2001.

1.3 Deviations, Additions and Exclusions - There were no deviations, additions to, or exclusions from the test specification during this test series.

1.4 Applicable Documents - The following documents of the exact issue designated form part of this document to the extent specified herein:

- Federal Communications Commission "Code of Federal Regulations", Title 47, Part 15, Subpart C, dated 1 October 2003
- ANSI C63.4-2001, "American National Standard for Methods of Measurement of Radio-Noise Emissions from Low-Voltage Electrical and Electronic Equipment in the Range of 9 kHz to 40 GHz"

1.5 Subcontractor Identification - This series of tests was performed by Elite Electronic Engineering Incorporated of Downers Grove, Illinois. The laboratory is accredited by the National Institute of Standards and Technology (NIST) under the National Voluntary Laboratory Accreditation Program (NVLAP). NVLAP Lab Code: 100278-0.

1.6 Laboratory Conditions The temperature at the time of the test was 23ºC and the relative humidity was 31%.

2.0 TEST ITEM SETUP AND OPERATION:

The test item is a Beckwith Electric Model MD2911 Transciever with external antennas. A block diagram of the test item setup is shown as Figure 1.

2.1 Power Input - The test item was powered with 12VDC from a Jameco, Model DBU120020 power supply via 6 feet of unshielded power leads.

2.2 Grounding - The test item was grounded via the return side of the unshielded power leads to the transformer.

2.3 Peripheral Equipment - No peripheral equipment was submitted with the test item.

2.4 Interconnect Cables - No interconnect cables were submitted with the test item.

2.5 Operational Mode - For all tests the test item was placed on an 80cm high non-conductive stand. The test item and all peripheral equipment were energized.

For all tests, the test item was powered. The test item was set to transmit continuously at 2451.0MHz using digital modulation. There were no user controls to adjust or operate the test item. The tests were performed with the test item transmitting at a fixed 2451MHz.

3.0 TEST EQUIPMENT:

3.1 Test Equipment List - A list of the test equipment used can be found on Table I. All equipment was calibrated per the instruction manuals supplied by the manufacturer.

3.2 Calibration Traceability Test equipment is maintained and calibrated on a regular basis. All calibrations are traceable to the National Institute of Standards and Technology (NIST).

4.0 REQUIREMENTS, PROCEDURES AND RESULTS:

4.1 Powerline Conducted Emissions

4.1.1 Requirements – Since conducted emission measurements will be provided by Beckwith Electric, no conducted emission measurements were taken.

4.2 Radiated Measurements

4.2.1 Requirements - Per section 15.247(c), in any 100kHz bandwidth outside the frequency band in which the spread spectrum or digitally modulated intentional radiator is operating, the radio frequency power that is produced by at least 20 dB below that in the 100kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated emissions measurement. Attenuation below the general limits specified in §15.209(a) is not required. In addition, radiated emissions which fall on the restricted bands, as defined in §15.205(a), must comply with the radiated emission limits specified in §15.209(a) (see§ 15.205(c)).

Paragraph 15.209(a) has the following radiated emission limits:

Frequency MHz	Field Strength (microvolts/meter)	Measurement distance (meters)
0.009-0.490	2400/F(kHz)	300
0.490-1.705	24000/F(kHz)	30
1.705-30.0	30	3
30.0-88.0	100	3
88.0-216.0	150	3
216.0-960.0	200	3
Above 960	500	3

4.2.2 Procedures -Radiated measurements were manually performed in a 32ft. x 20ft. x 14ft. high shielded enclosure. The shielded enclosure prevents emissions from other sources, such as radio and TV stations from interfering with the measurements. All powerlines and signal lines entering the enclosure pass through filters on the enclosure wall. The powerline filters prevent extraneous signals from entering the enclosure on these leads.

Preliminary radiated emission sweeps were made from 30MHz to 18GHz to ensure that no emissions in the restricted bands exceeded the limits of 15.209(a) and that all emissions not in restricted bands meet the -20dBc radiated emission requirement of 15.247(c). Radiated emissions above 18GHz were investigated manually.

Final radiated emission tests were performed for all harmonics which fall in a restricted band. To ensure that maximum emission levels were measured, the following steps were taken:

1) Measurements were made using an average detector and a double ridged waveguide antenna.
2) To ensure that maximum or worst case, emission levels were measured, the following steps were taken:
   (a) The test item was rotated so that all of its sides were exposed to the receiving antenna.
   (b) Since the measuring antenna is linearly polarized, both horizontal and vertical field components were measured.
   (c) The measuring antenna was raised and lowered for each antenna polarization to maximize the readings.

The measurement distance was 3 meters for the 2^{nd} and 3^{rd} harmonics and 1 meter for the 5^{th}, 8^{th} and 9^{th} harmonics.

Radiated emissions measurements were taken at a distance of 1 meter for all harmonics greater than 7353.0MHz. The reading was converted to an equivalent field intensity at 3 meters using linear extrapolation. A -9.5dB (-9.5 = 20 * log (1m/3m)) distance correction factor was applied to all data.

Photographs of the test item setup with each antenna are presented as Figures 2, 3, 4 and 5.

4.2.3 Results - Preliminary radiated emissions plots from 30MHz to 2GHz for all four configurations are shown on data pages 11 through 14. Emissions which were located in a restricted band were measured and final radiated emissions data is presented on data page 15. As can be seen, the emissions located in the restricted bands were within the general limits of 15.209.

Preliminary radiated emissions plot from 2GHz to 18GHz for all four configurations are shown on data pages 16 through 23. Final radiated emissions data is presented on data pages 23 through 27. As can be seen by the data the test item did meet the emissions limits of 15.247(c).

5.0 CONCLUSIONS:

The Beckwith Electric Model MD2911 Transciever when tested in the configurations listed below did fully meet the selected radiated emission requirements of the FCC "Code of Federal Regulations" Title 47, Part 15.247, Subpart C, Section 15.205 et seq. for Intentional Radiators, when tested per ANSI C63.4-2001.

Test Configurations:

1. Pacific Wireless Model OD-24-9 omni-directional antenna with a 29 foot length of Times Microwave LMR-195 communications cable.
2. Pacific Wireless Model OD-24-9 omni-directional antenna with a 4 foot length of Times Microwave LMR-400 communications cable
3. Pacific Wireless Model PMANT-19-HD-PF1 Parabolic Grid antenna with a 29 foot length of Times Microwave LMR-195 communications cable.
4. Pacific Wireless Model PMANT-19-HD-PF1 Parabolic Grid antenna with a 29 foot length of Times Microwave LMR-400 communications cable.

6.0 CERTIFICATION:

Elite Electronic Engineering Incorporated certifies that the information contained in this report was obtained under conditions which meet or exceed those specified in the test specifications.

The data presented in this test report pertains to the test item at the test date. Any electrical or mechanical modification made to the test item subsequent to the specified test date will serve to invalidate the data and void this certification.

7.0 ENDORSEMENT DISCLAIMER:

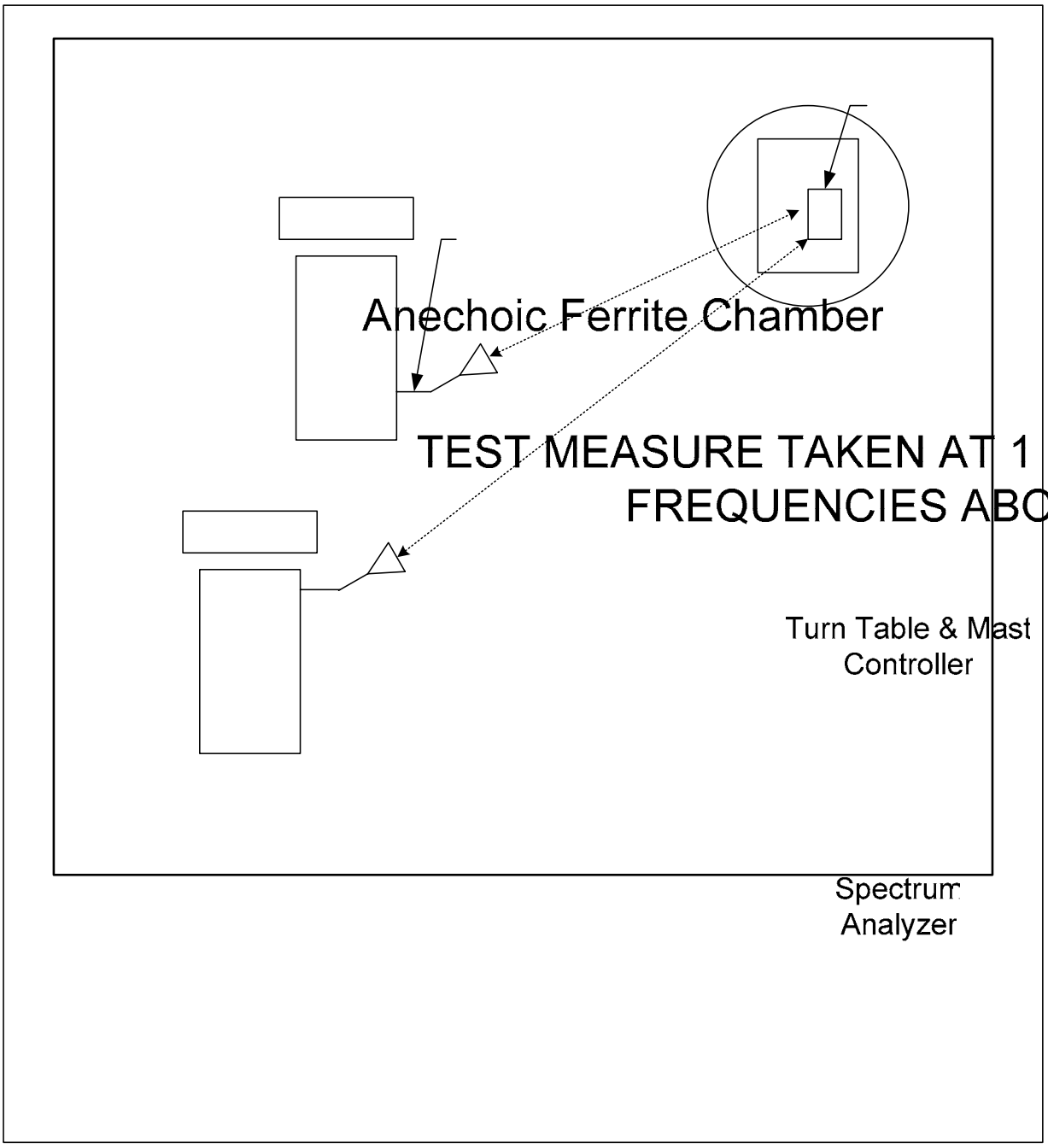
This report must not be used to claim product endorsement by NVLAP or any agency of the US Government.

TABLE I: TEST EQUIPMENT LIST

ELITE ELECTRONIC ENG. INC. Page: 1

Eq ID	Equipment Description	Manufacturer	Model No.	Serial No.	Frequency Range	Cal Date	Cal Inv	Due Date
Equipment Type: ACCESSORIES, MISCELLANEOUS								
XPR0	HIGH PASS FILTER	K&L MICROWAVE	11SH10-4800/	001	4.8-20GHZ	07/03/03	12	07/03/04
Equipment Type: ANTENNAS								
NHG1	STANDARD GAIN HORN ANTENNA	NARDA	638	---	18-26.5GHZ		NOTE 1	
NWI0	RIDGED WAVE GUIDE	AEL	H1498	153	2-18GHZ	09/05/03	12	09/05/04
Equipment Type: CONTROLLERS								
CMA0	MULTI-DEVICE CONTROLLER	EMCO	2090	9701-1213	---		N/A	
Equipment Type: RECEIVERS								
RBA0	EMI TEST RECEIVER	ROHDE & SCHWARZ	ESIB26	100145	20HZ-26.5GHZ	03/14/03	18	09/14/04

Cal. Interval: Listed in Months I/O: Initial Only N/A: Not Applicable
Note 1: For the purpose of this test, the equipment was calibrated over the specified frequency range, pulse rate, or modulation prior to the test or monitored by a calibrated instrument.

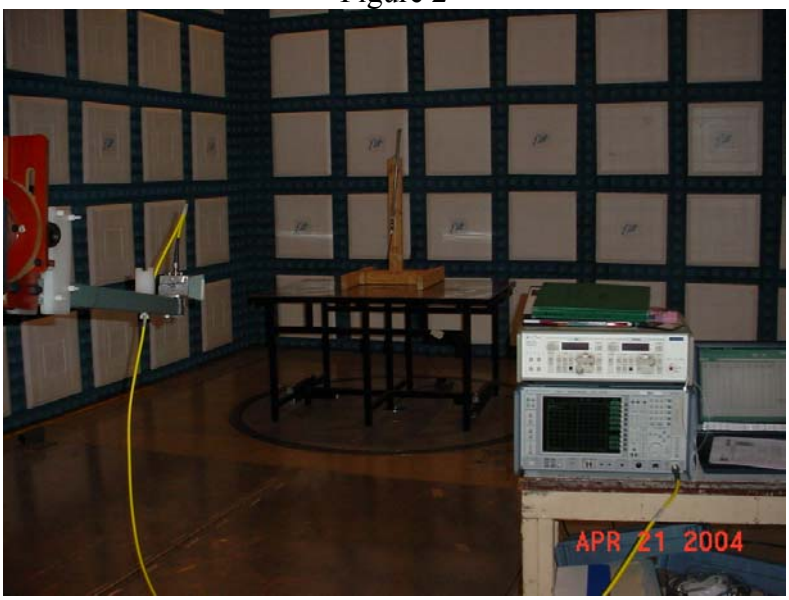


Turn Table & Mast
Controller

Receive A

Spectrum
Analyzer

Figure 2



Test Setup for Measurement of Radiated Emissions from a Pacific Wireless Model OD-24-9 Omni Antenna and 4 feet of Times Microwave LMR-195 Cable

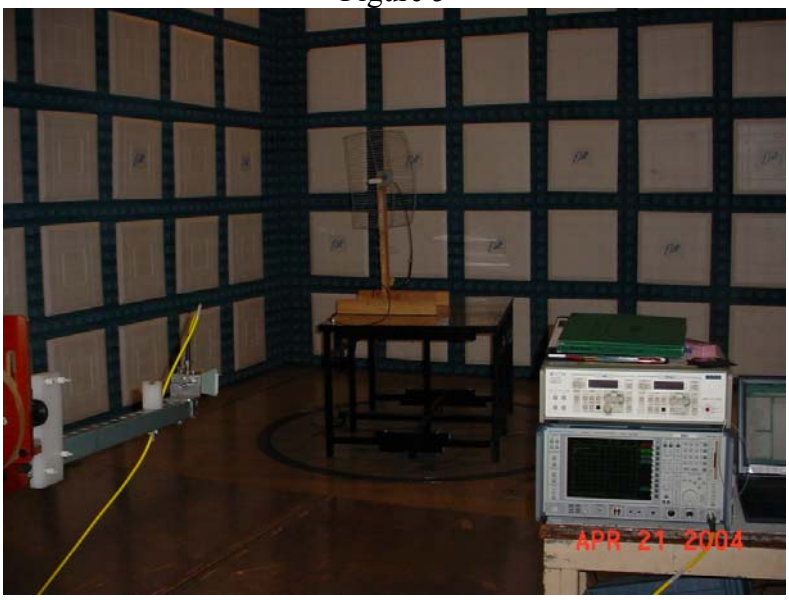
Figure 3

Test Setup for Measurement of Radiated Emissions from a Pacific Wireless Model OD-24-9 Omni Antenna and 29 feet of Times Microwave LMR-400 Cable

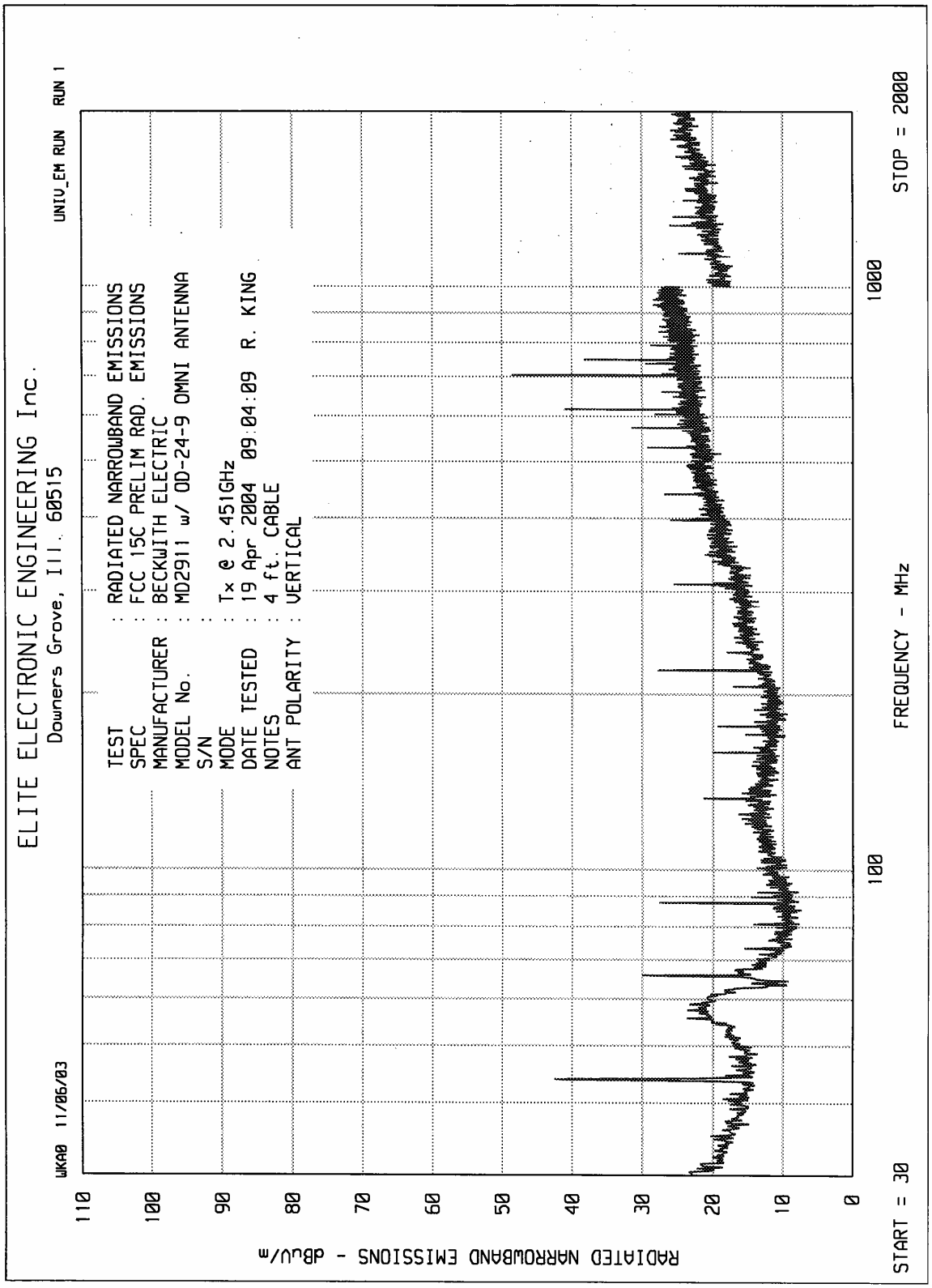
Figure 4

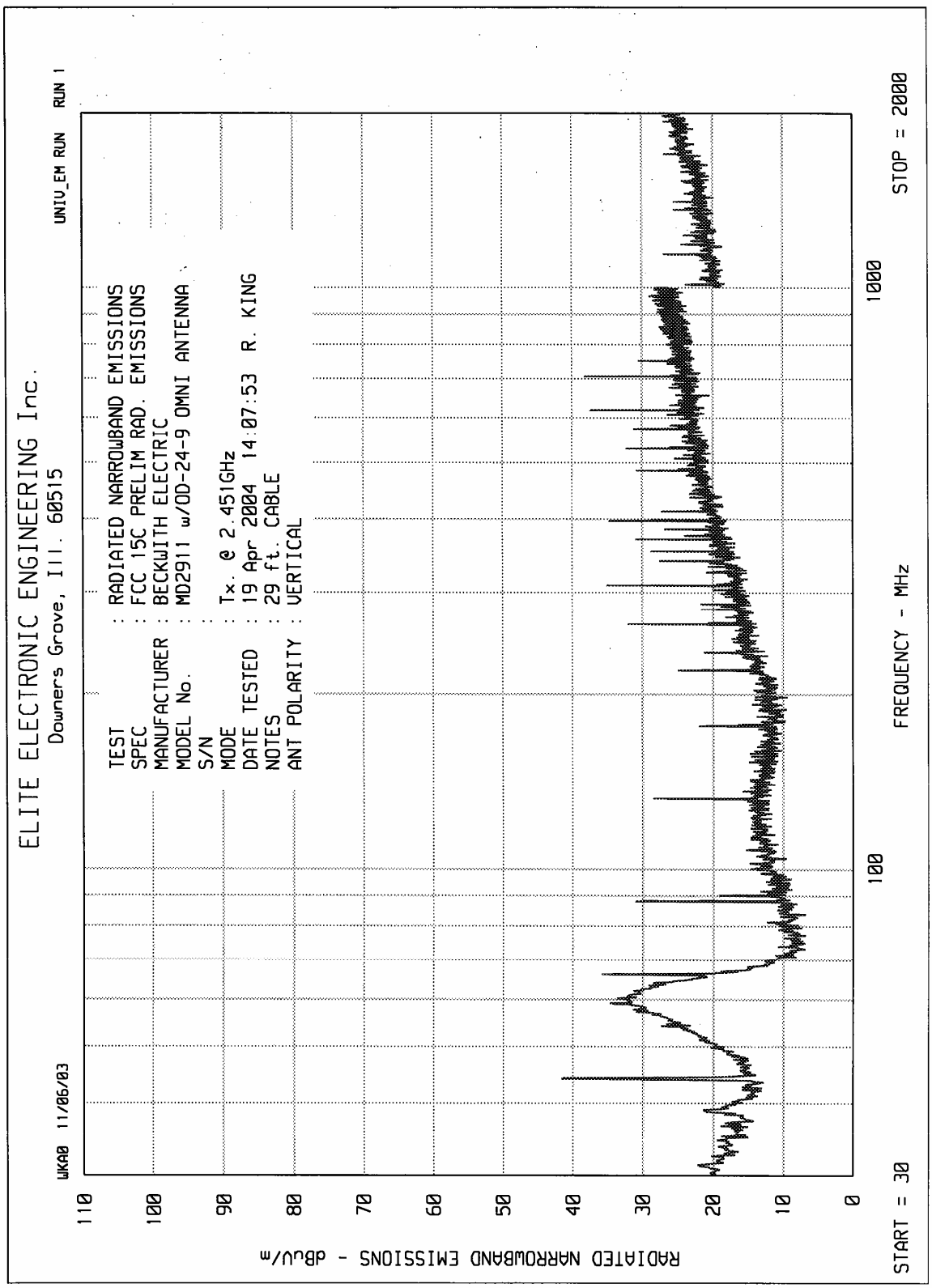
Test Setup for Measurement of Radiated Emissions from a Pacific Wireless Model PMANT-19-HD-PF1 Parabolic Grid Antenna and 4 feet of Times Microwave LMR-195 Cable

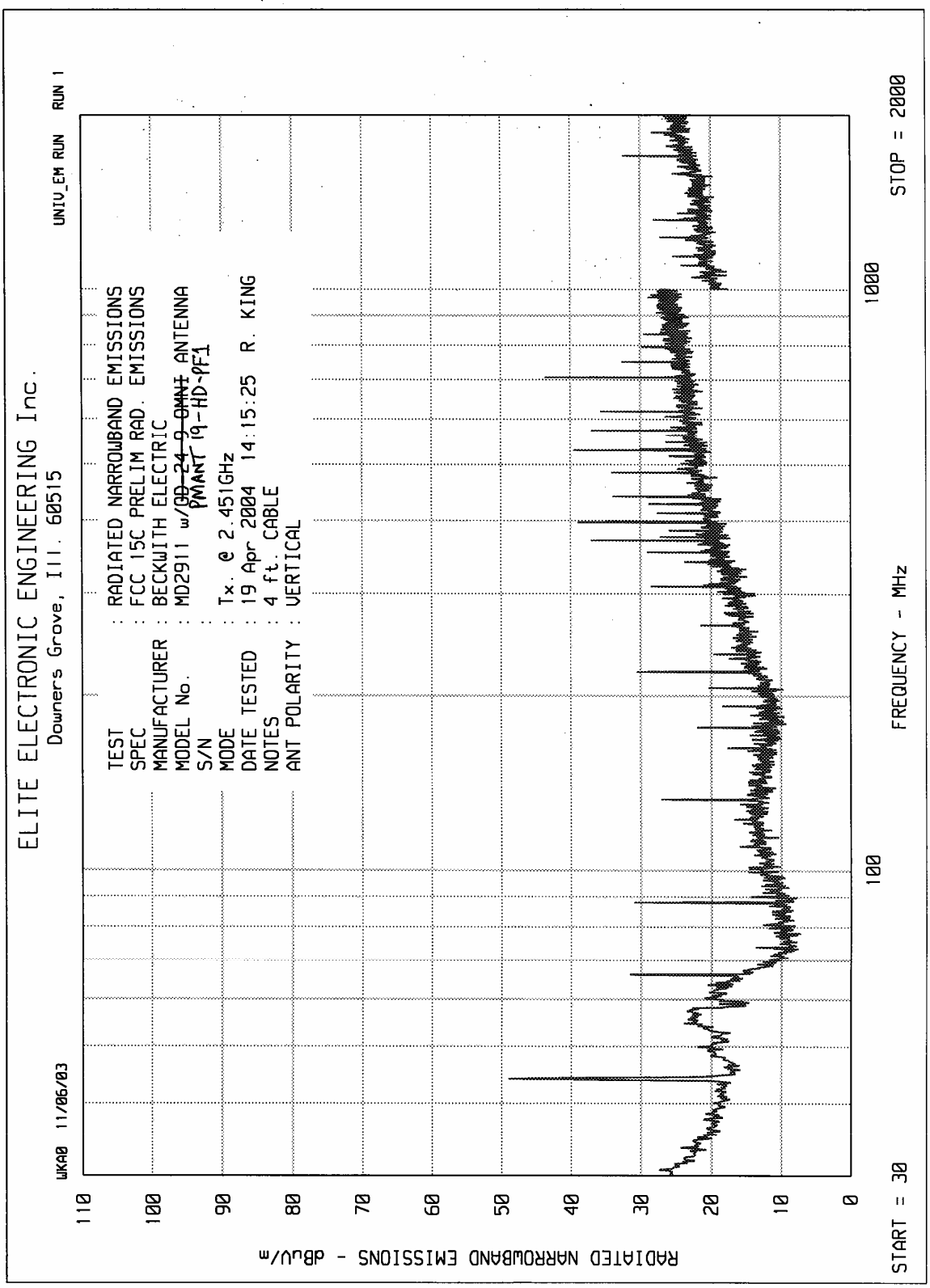
Figure 5

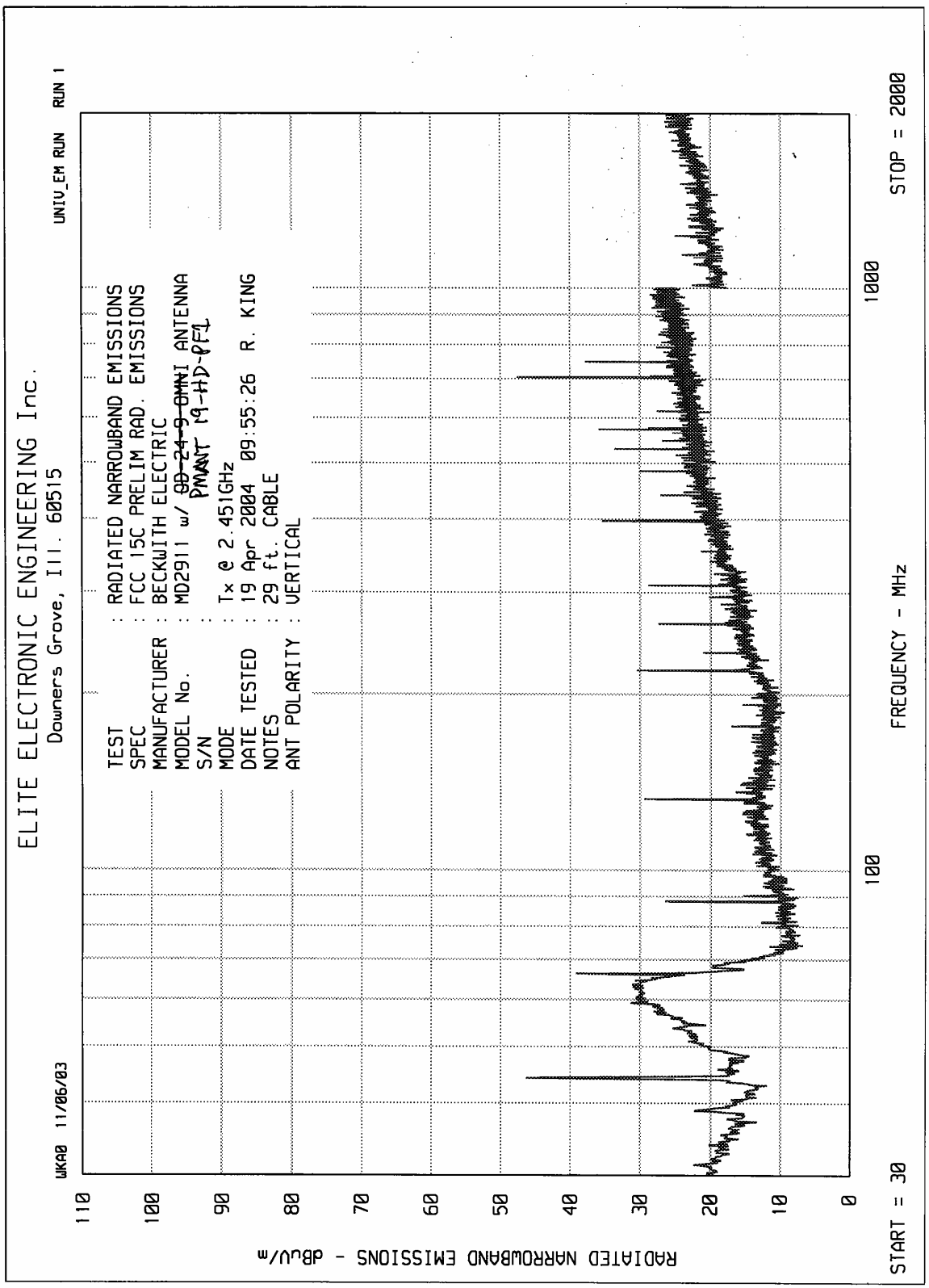


Test Setup for Measurement of Radiated Emissions from a Pacific Wireless Model PMANT-19-HD-PF1 Parabolic Grid Antenna and 29 feet of Times Microwave LMR-400 cable


ELITE ELECTRONIC ENGINEERING Inc.
Downers Grove, Ill. 60515
UNIV_EM RUN RUN 1
WKA0 11/06/03
TEST : RADIATED NARROWBAND EMISSIONS
SPEC : FCC 15C PRELIM RAD. EMISSIONS
MANUFACTURER : BECKWITH ELECTRIC
MODEL No. : MD2911 w/ OD-24-9 OMNI ANTENNA
S/N :
MODE : Tx @ 2.451GHz
DATE TESTED : 19 Apr 2004 09:04:09 R. KING
NOTES : 4 ft. CABLE
ANT POLARITY : VERTICAL
RADIATED NARROWBAND EMISSIONS - dBuV/m
110
100
90
80
70
60
50
40
30
20
10
0
START = 30
100
1000
STOP = 2000
FREQUENCY - MHz


ELITE ELECTRONIC ENGINEERING Inc.
Downers Grove, Ill. 60515
UNIV_EM RUN RUN 1
WKA0 11/06/03
TEST : RADIATED NARROWBAND EMISSIONS
SPEC : FCC 15C PRELIM RAD. EMISSIONS
MANUFACTURER : BECKWITH ELECTRIC
MODEL No. : MD2911 w/OD-24-9 OMNI ANTENNA
S/N :
MODE : Tx. @ 2.451GHz
DATE TESTED : 19 Apr 2004 14:07:53 R. KING
NOTES : 29 ft. CABLE
ANT POLARITY : VERTICAL
RADIATED NARROWBAND EMISSIONS - dBuV/m
110
100
90
80
70
60
50
40
30
20
10
0
START = 30
100
1000
STOP = 2000
FREQUENCY - MHz


ELITE ELECTRONIC ENGINEERING Inc.
Downers Grove, Ill. 60515
UNIV_EM RUN RUN 1
WKA0 11/06/03
TEST : RADIATED NARROWBAND EMISSIONS
SPEC : FCC 15C PRELIM RAD. EMISSIONS
MANUFACTURER : BECKWITH ELECTRIC
MODEL No. : MD2911 w/~~00-24-0-OMNI~~ ANTENNA
S/N : PMANT 19-HD-PF1
MODE : Tx. @ 2.451GHz
DATE TESTED : 19 Apr 2004 14:15:25 R. KING
NOTES : 4 ft. CABLE
ANT POLARITY : VERTICAL
RADIATED NARROWBAND EMISSIONS - dBuV/m
110
100
90
80
70
60
50
40
30
20
10
0
START = 30
100
1000
STOP = 2000
FREQUENCY - MHz

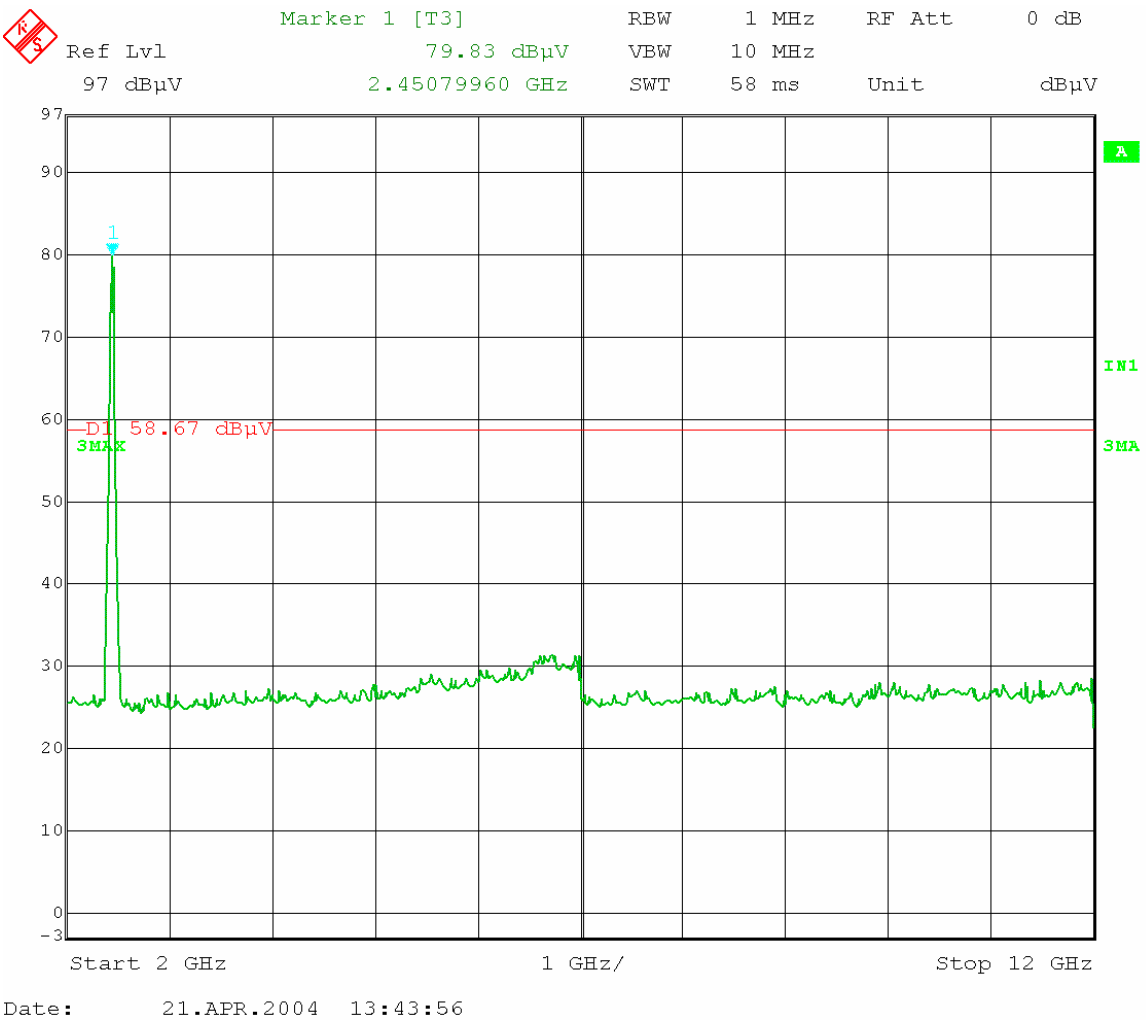

ELITE ELECTRONIC ENGINEERING Inc.
Downers Grove, Ill. 60515
UNIV_EM RUN RUN 1
WKA0 11/06/03
TEST : RADIATED NARROWBAND EMISSIONS
SPEC : FCC 15C PRELIM RAD. EMISSIONS
MANUFACTURER : BECKWITH ELECTRIC
MODEL No. : MD2911 w/ 00-24-9-OMNI ANTENNA
PMANT 19-HD-PFL
S/N :
MODE : Tx @ 2.451GHz
DATE TESTED : 19 Apr 2004 09:55:26 R. KING
NOTES : 29 ft. CABLE
ANT POLARITY : VERTICAL
RADIATED NARROWBAND EMISSIONS - dBuV/m
110
100
90
80
70
60
50
40
30
20
10
0
START = 30
100
1000
STOP = 2000
FREQUENCY - MHz

MANUFACTURER : Beckwith Electric
MODEL : MD2911
ANTENNA M/N : All antennas
CABLES M/N : All cables
SPECIFICATION : FCC-15.247 (c) Radiated Emissions in Restricted Bands
DATE : April 19, 2004
NOTES : All others emissions meet the 20dBc limit

FREQ.	ANT.	MTR. RDG.	AMBIENT	B.W. RBW/VBW	DIST. CORR. FACT.	ANT. FACT.	CABLE LOSS	PRE. AMP.	TOTAL	15.209 Limit
MHz	POL.	dBuV		Hz	dB	dB	dB	dB	dBuV/m	dBuV/m
OD-24-9 Omni Antenna w/ LMR-195 Cable										
118.0	H	1.8	Amb.	120k/10	0	12.9	0.6	0.0	15.3	43.5
132.0	V	20.4		120k/10	0	12.6	0.7	0.0	33.7	43.5
OD-24-9 Omni Antenna w/ LMR-400 Cable										
119.0	H	-8.6	Amb.	120k/10	0	13.0	0.6	0.0	5.0	43.5
132.0	V	23.8		120k/10	0	12.6	0.7	0.0	37.1	43.5
PMANT 19-HD-PF1Parabolic Grid Antenna w/ LMR-195 Cable										
120.0	V	-6.2	Amb.	120k/10	0	12.9	0.6	0.0	7.3	43.5
132.0	H	20.3		120k/10	0	12.6	0.7	0.0	33.6	43.5
PMANT 19-HD-PF1Parabolic Grid Antenna w/ LMR-400 Cable										
123.0	V	-7.9	Amb.	120k/10	0	12.9	0.6	0.0	5.6	43.5
132.0	H	21.3		120k/10	0	12.6	0.7	0.0	34.6	43.5

Checked BY : Richard E. King

Richard E. King



Manufacturer	:	Beckwith Electric
Model No.	:	MD2911
Serial No.	:	none assigned
Antenna	:	OD-24-9
Cable	:	LMR-195
Test	:	FCC 15.247 (c) Preliminary Radiated Emissions
Test Mode	:	Tx @ 2451.0MHz
Date	:	April 21, 2004
Notes	:	

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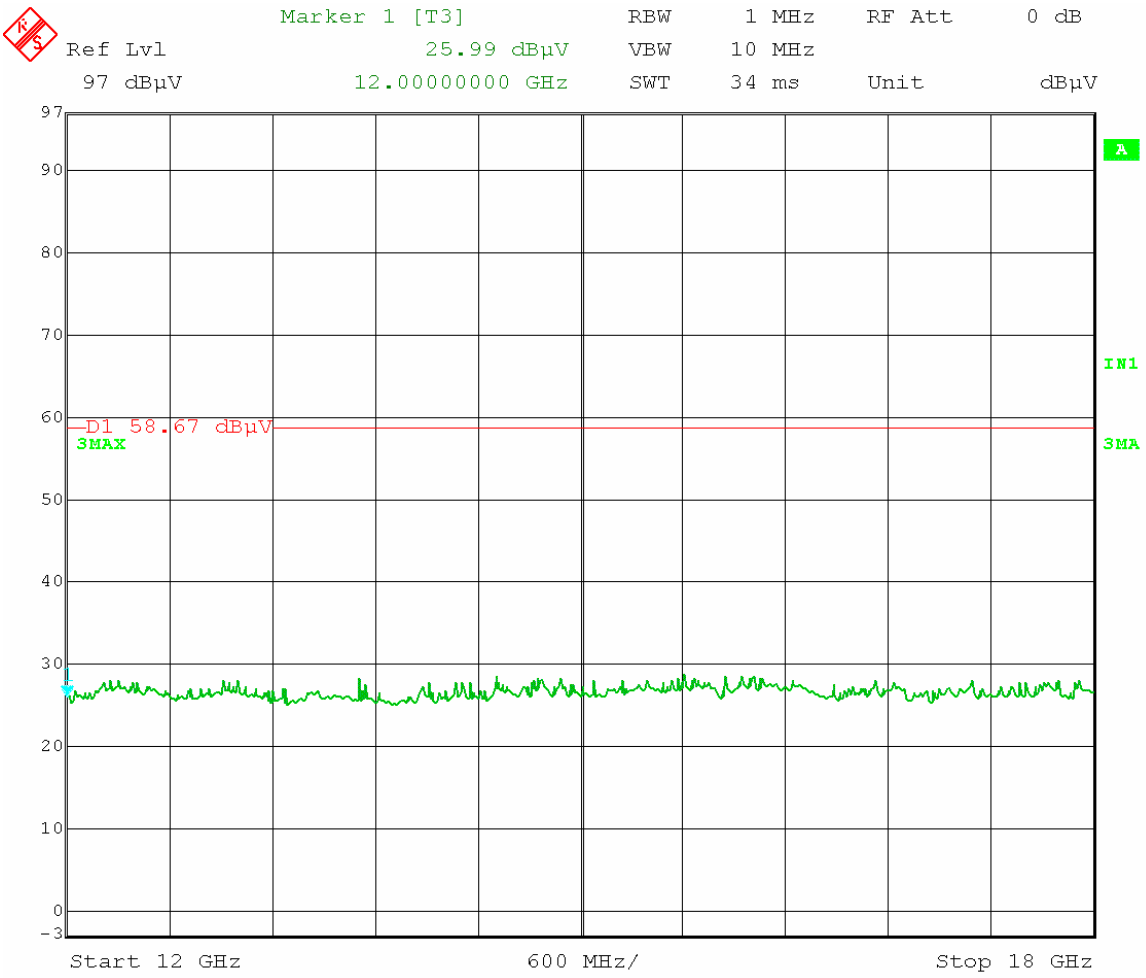

Manufacturer	:	Beckwith Electric
Model No.	:	MD2911
Serial No.	:	none assigned
Antenna	:	OD-24-9
Cable	:	LMR-195
Test	:	FCC 15.247 (c) Preliminary Radiated Emissions
Test Mode	:	Tx @ 2451.0MHz
Date	:	April 21, 2004
Notes	:	

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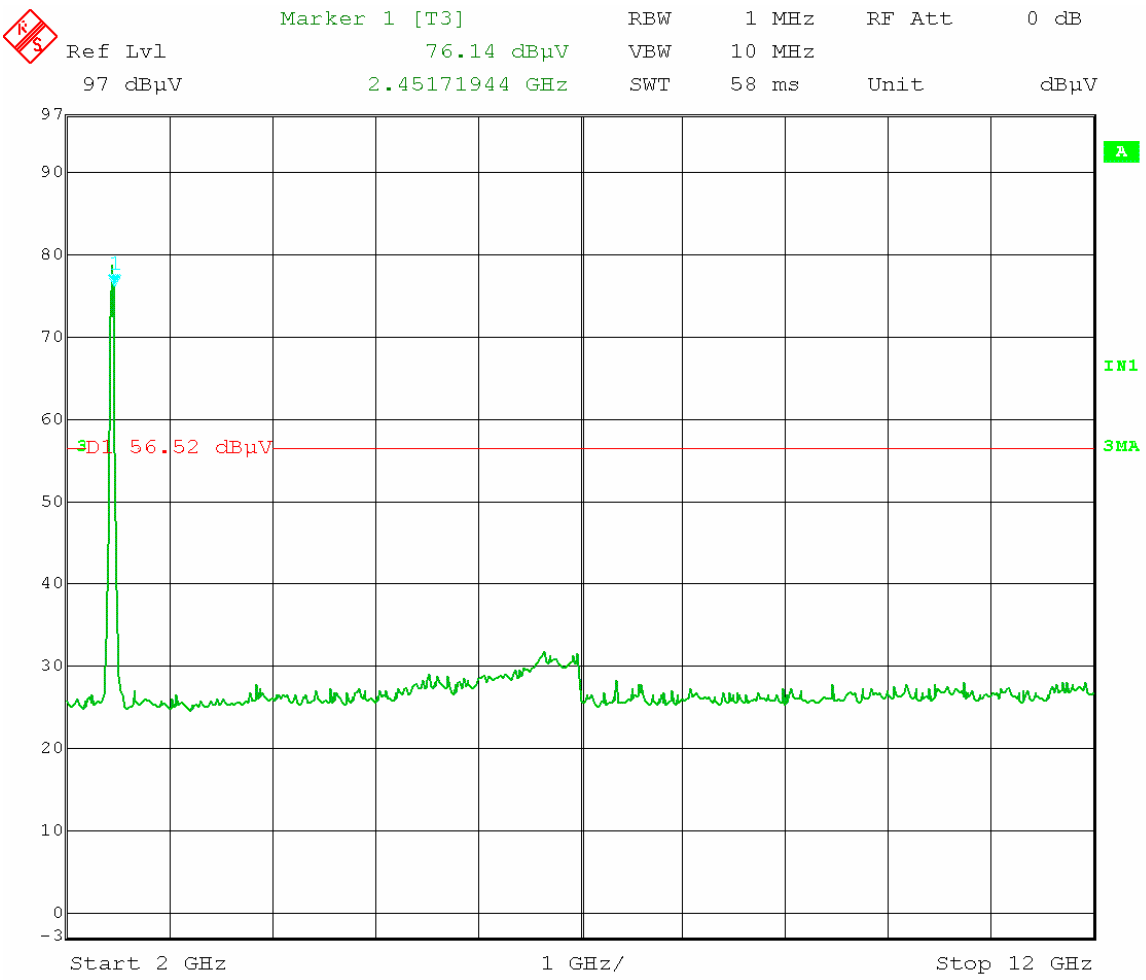

Manufacturer	:	Beckwith Electric
Model No.	:	MD2911
Serial No.	:	none assigned
Antenna	:	OD-24-9
Cable	:	LMR-400
Test	:	FCC 15.247 (c) Preliminary Radiated Emissions
Test Mode	:	Tx @ 2451.0MHz
Date	:	April 21, 2004
Notes	:	

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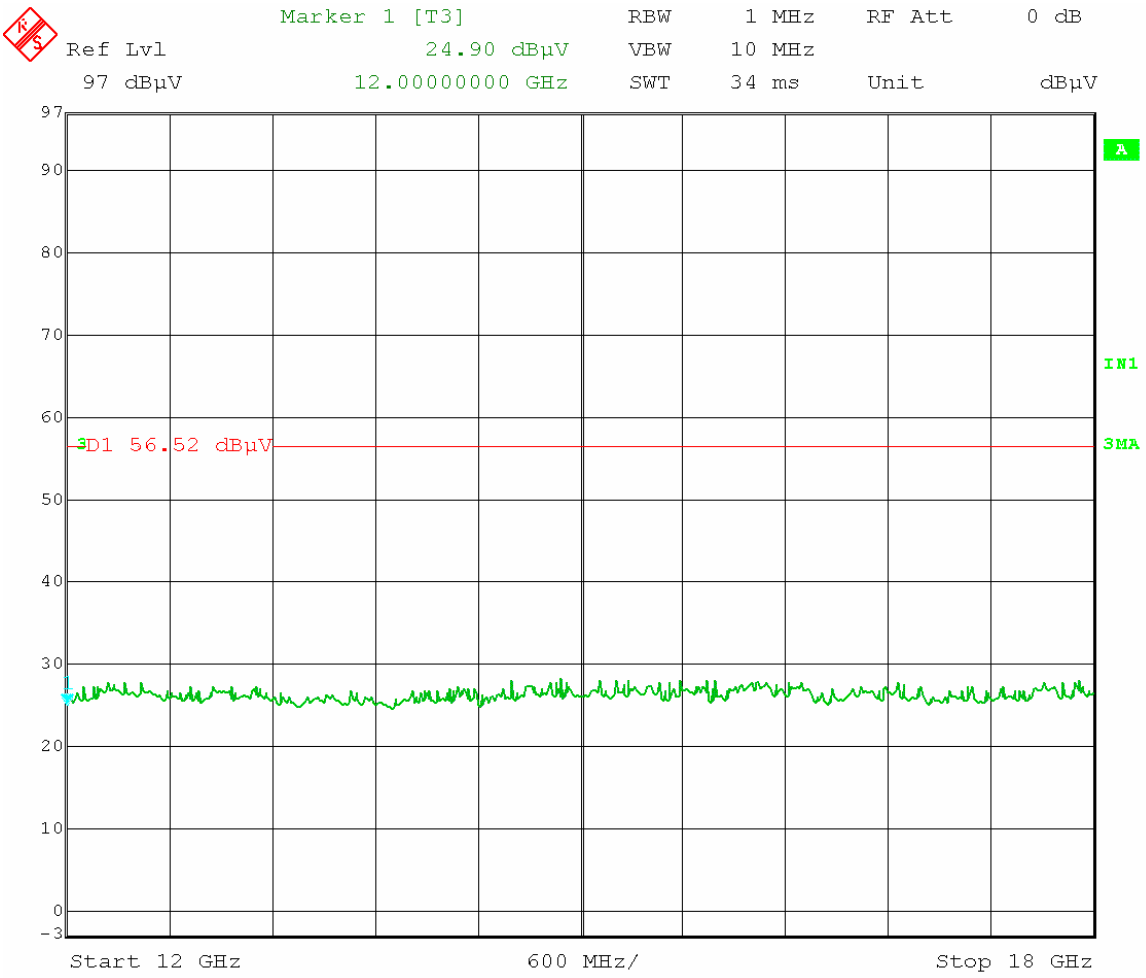
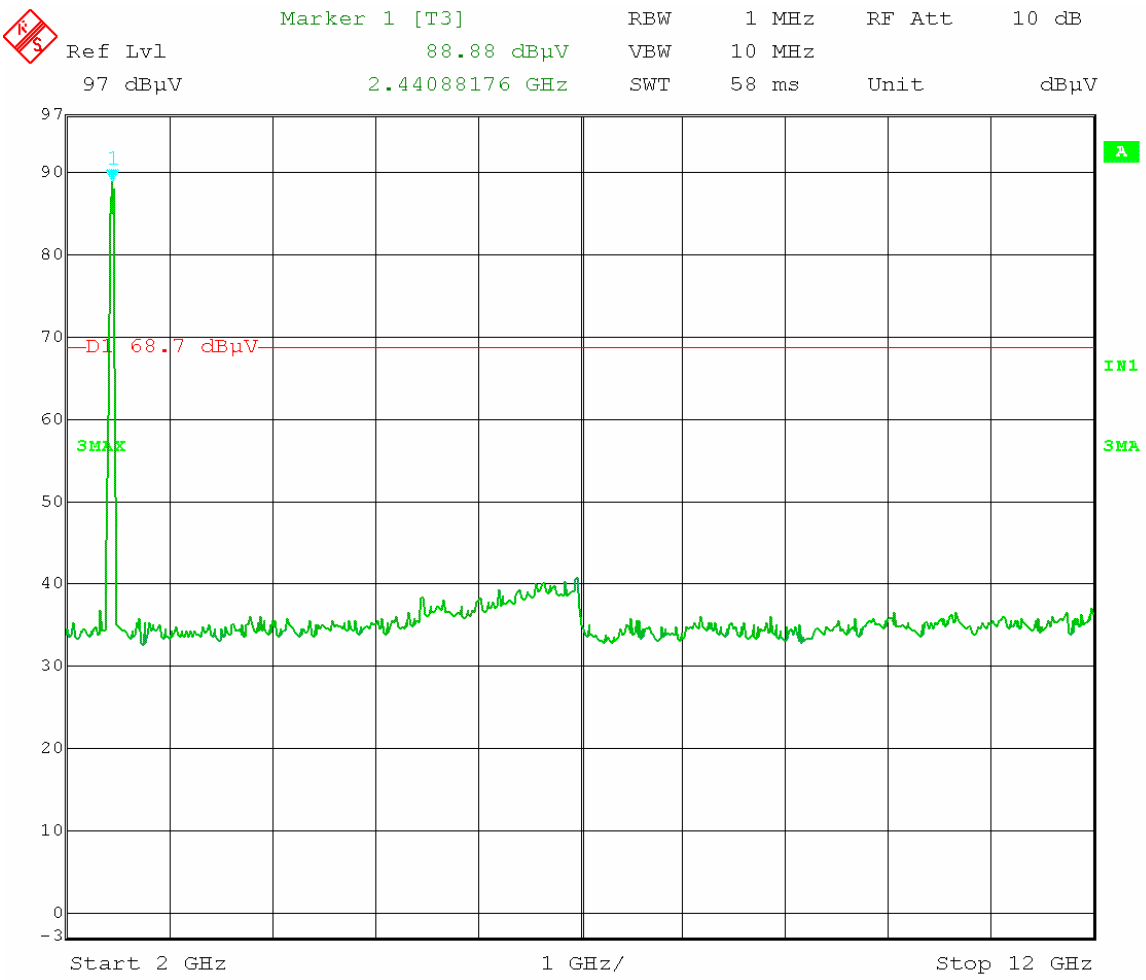


Manufacturer	:	Beckwith Electric
Model No.	:	MD2911
Serial No.	:	none assigned
Antenna	:	OD-24-9
Cable	:	LMR-400
Test	:	FCC 15.247 (c) Preliminary Radiated Emissions
Test Mode	:	Tx @ 2451.0MHz
Date	:	April 21, 2004
Notes	:	

Checked BY : Richard E. King

Richard E. King



Manufacturer	:	Beckwith Electric
Model No.	:	MD2911
Serial No.	:	none assigned
Antenna	:	PMANT-19-HD-PF1
Cable	:	LMR-195
Test	:	FCC 15.247 (c) Preliminary Radiated Emissions
Test Mode	:	Tx @ 2451.0MHz
Date	:	April 21, 2004
Notes	:	

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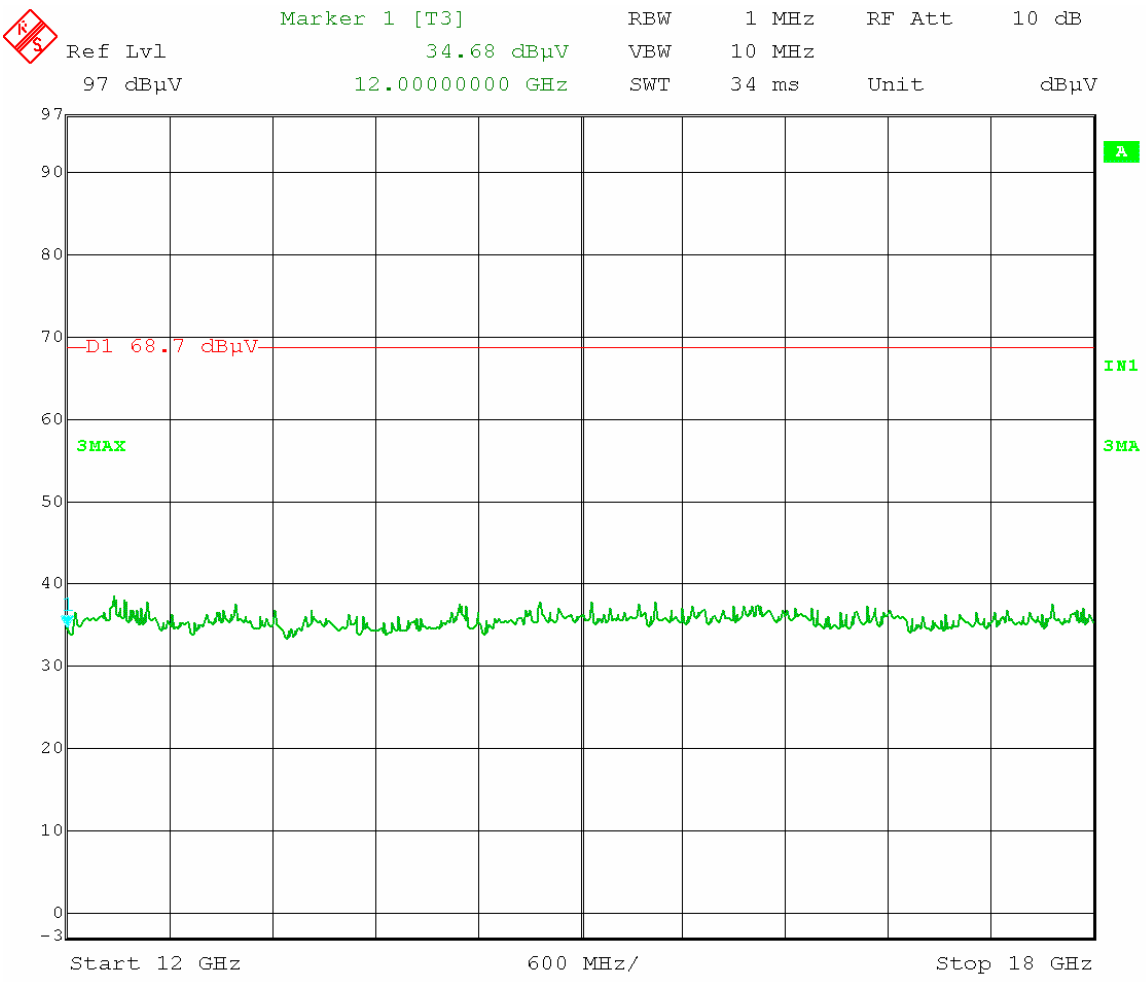

Manufacturer	:	Beckwith Electric
Model No.	:	MD2911
Serial No.	:	none assigned
Antenna	:	PMANT-19-HD-PF1
Cable	:	LMR-195
Test	:	FCC 15.247 (c) Preliminary Radiated Emissions
Test Mode	:	Tx @ 2451.0MHz
Date	:	April 21, 2004
Notes	:	

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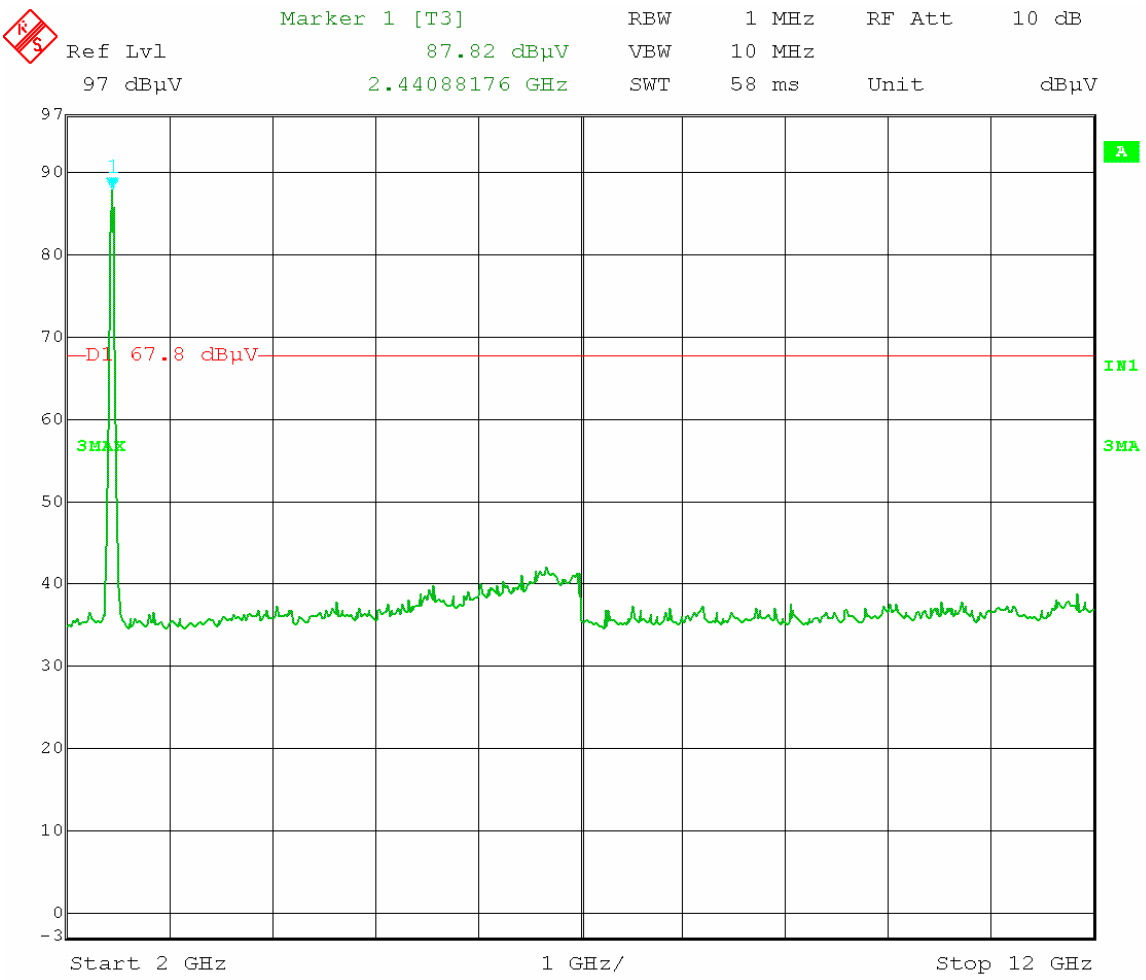
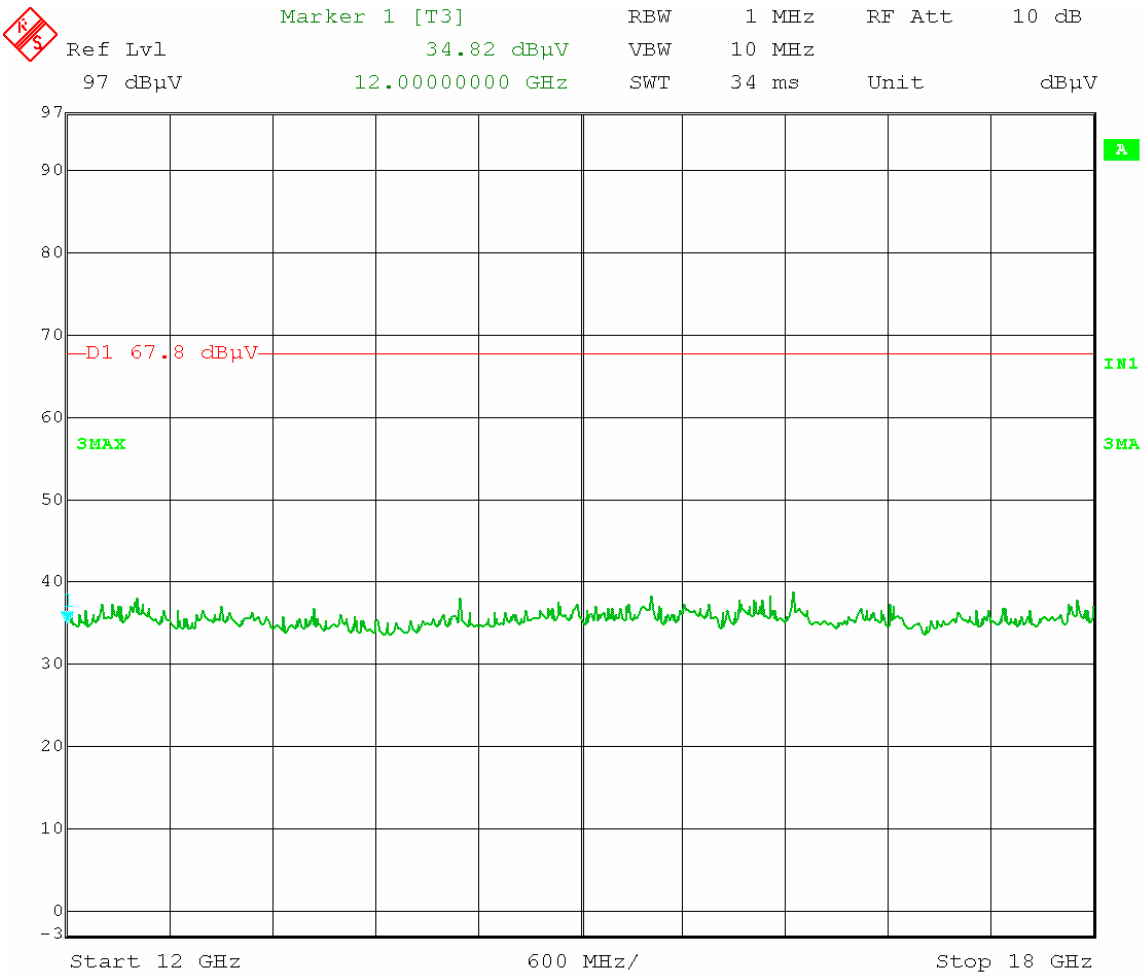


Date: 21.APR.2004 14:42:26

Manufacturer	:	Beckwith Electric
Model No.	:	MD2911
Serial No.	:	none assigned
Antenna	:	PMANT-19-HD-PF1
Cable	:	LMR-400
Test	:	FCC 15.247 (c) Preliminary Radiated Emissions
Test Mode	:	Tx @ 2451.0MHz
Date	:	April 21, 2004
Notes	:	

Checked BY : Richard E. King

Richard E. King



Manufacturer	:	Beckwith Electric
Model No.	:	MD2911
Serial No.	:	none assigned
Antenna	:	PMANT-19-HD-PF1
Cable	:	LMR-400
Test	:	FCC 15.247 (c) Preliminary Radiated Emissions
Test Mode	:	Tx @ 2451.0MHz
Date	:	April 21, 2004
Notes	:	

Checked BY : Richard E. King

Richard E. King

MANUFACTURER : Beckwith Electric
MODEL : MD2911
ANTENNA M/N : OD-24-9
CABLES M/N : LMR-195
SPECIFICATION : FCC-15.247 Radiated Emissions
DATE : April 19, 2004
NOTES :

FREQ. MHz	ANT. POL.	MTR. RDG. dBuV	AMBIENT	B.W. RBW/VBW Hz	DIST. CORR. FACT. dB	ANT. FACT. dB	CABLE LOSS dB	PRE. AMP. dB	TOTAL dBuV/m	15.209 Limit dBuV/m
4902.0	H	14.3	Amb.	1M/10		34.9	1.4	0.0	50.6	54.0
4902.0	V	15.1	Amb.	1M/10		34.9	1.4	0.0	51.4	54.0
7353.0	H	13.5	Amb.	1M/10		38.0	2.1	0.0	53.6	54.0
7353.0	V	13.6	Amb.	1M/10		38.0	2.1	0.0	53.7	54.0
12255.0	H	15.3	Amb.	1M/10	-9.5	41.3	2.5	0.0	49.6	54.0
12255.0	V	15.3	Amb.	1M/10	-9.5	41.3	2.5	0.0	49.6	54.0
19608.0	H	14.7	Amb.	1M/10	-9.5	40.3	1.0	0.0	46.5	54.0
19608.0	V	14.8	Amb.	1M/10	-9.5	40.3	1.0	0.0	46.6	54.0
22059.0	H	15.9	Amb.	1M/10	-9.5	40.5	1.0	0.0	47.9	54.0
22059.0	V	16.0	Amb.	1M/10	-9.5	40.5	1.0	0.0	48.0	54.0

Checked BY : Richard E. King

Richard E. King

MANUFACTURER : Beckwith Electric
MODEL : MD2911
ANTENNA M/N : OD-24-9
CABLES M/N : LMR-400
SPECIFICATION : FCC-15.247 Radiated Emissions
DATE : April 19, 2004
NOTES :

FREQ. MHz	ANT. POL.	MTR. RDG. dBuV	AMBIENT	B.W. RBW/VBW Hz	DIST. CORR. FACT. dB	ANT. FACT. dB	CABLE LOSS dB	PRE. AMP. dB	TOTAL dBuV/m	15.209 Limit dBuV/m
4902.0	H	14.3	Amb.	1M/10		34.9	1.4	0.0	50.6	54.0
4902.0	V	15.1	Amb.	1M/10		34.9	1.4	0.0	51.4	54.0
7353.0	H	13.5	Amb.	1M/10		38.0	2.1	0.0	53.6	54.0
7353.0	V	13.6	Amb.	1M/10		38.0	2.1	0.0	53.7	54.0
12255.0	H	15.3	Amb.	1M/10	-9.5	41.3	2.5	0.0	49.6	54.0
12255.0	V	15.3	Amb.	1M/10	-9.5	41.3	2.5	0.0	49.6	54.0
19608.0	H	14.7	Amb.	1M/10	-9.5	40.3	1.0	0.0	46.5	54.0
19608.0	V	14.8	Amb.	1M/10	-9.5	40.3	1.0	0.0	46.6	54.0
22059.0	H	15.9	Amb.	1M/10	-9.5	40.5	1.0	0.0	47.9	54.0
22059.0	V	16.0	Amb.	1M/10	-9.5	40.5	1.0	0.0	48.0	54.0

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Richard E. King

MANUFACTURER : Beckwith Electric
MODEL : MD2911
ANTENNA M/N : PMANT-19-HD-PF1
CABLES M/N : LMR-195
SPECIFICATION : FCC-15.247 Radiated Emissions
DATE : April 19, 2004
NOTES :

FREQ. MHz	ANT. POL.	MTR. RDG. dBuV	AMBIENT	B.W. RBW/VBW Hz	DIST. CORR. FACT. dB	ANT. FACT. dB	CABLE LOSS dB	PRE. AMP. dB	TOTAL dBuV/m	15.209 Limit dBuV/m
4902.0	H	14.3	Amb.	1M/10		34.9	1.4	0.0	50.6	54.0
4902.0	V	15.1	Amb.	1M/10		34.9	1.4	0.0	51.4	54.0
7353.0	H	13.5	Amb.	1M/10		38.0	2.1	0.0	53.6	54.0
7353.0	V	13.6	Amb.	1M/10		38.0	2.1	0.0	53.7	54.0
12255.0	H	15.3	Amb.	1M/10	-9.5	41.3	2.5	0.0	49.6	54.0
12255.0	V	15.3	Amb.	1M/10	-9.5	41.3	2.5	0.0	49.6	54.0
19608.0	H	14.7	Amb.	1M/10	-9.5	40.3	1.0	0.0	46.5	54.0
19608.0	V	14.8	Amb.	1M/10	-9.5	40.3	1.0	0.0	46.6	54.0
22059.0	H	15.9	Amb.	1M/10	-9.5	40.5	1.0	0.0	47.9	54.0
22059.0	V	16.0	Amb.	1M/10	-9.5	40.5	1.0	0.0	48.0	54.0

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Richard E. King

MANUFACTURER : Beckwith Electric
MODEL : MD2911
ANTENNA M/N : PMANT-19-HD-PF1
CABLES M/N : LMR-400
SPECIFICATION : FCC-15.247 Radiated Emissions
DATE : April 19, 2004
NOTES :

FREQ. MHz	ANT. POL.	MTR. RDG. dBuV	AMBIENT	B.W. RBW/VBW Hz	DIST. CORR. FACT. dB	ANT. FACT. dB	CABLE LOSS dB	PRE. AMP. dB	TOTAL dBuV/m	15.209 Limit dBuV/m
4902.0	H	14.3	Amb.	1M/10		34.9	1.4	0.0	50.6	54.0
4902.0	V	15.1	Amb.	1M/10		34.9	1.4	0.0	51.4	54.0
7353.0	H	13.5	Amb.	1M/10		38.0	2.1	0.0	53.6	54.0
7353.0	V	13.6	Amb.	1M/10		38.0	2.1	0.0	53.7	54.0
12255.0	H	15.3	Amb.	1M/10	-9.5	41.3	2.5	0.0	49.6	54.0
12255.0	V	15.3	Amb.	1M/10	-9.5	41.3	2.5	0.0	49.6	54.0
19608.0	H	14.7	Amb.	1M/10	-9.5	40.3	1.0	0.0	46.5	54.0
19608.0	V	14.8	Amb.	1M/10	-9.5	40.3	1.0	0.0	46.6	54.0
22059.0	H	15.9	Amb.	1M/10	-9.5	40.5	1.0	0.0	47.9	54.0
22059.0	V	16.0	Amb.	1M/10	-9.5	40.5	1.0	0.0	48.0	54.0

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