

TEST REPORT FROM RADIO FREQUENCY INVESTIGATION LTD.

Test Of: Adaptive Broadband Ltd AB-ACCESS Subscriber Unit (SU)

To: FCC Part 15 Subpart E: 1998 (Unlicensed National Information Infrastructure Devices)

Test Report Serial No: RFI/EMCB1/RP38658A

This Test Report Is Issued Under The Authority Of Brian Watson Technical Director:	Checked By:
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Issue Date: 22 April 1999	Test Date: 29 March 1999 to 02 April 1999

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1. Client Information

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Company Name:	Adaptive Broadband Ltd
Address:	First Floor, Block C1 The Westbrook Centre Milton Road Cambridge CB4 1YQ Tel: +44-1223-713713 Fax: +44-1223-713714
Contact Name:	Mr P. Simpson Tel: +44-1223-713412 E-Mail: ps@adaptivebroadband.com

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2. Equipment Under Test (EUT)

The following information (with the exception of the Date of Receipt) has been supplied by the client:

2.1. Identification Of Equipment Under Test (EUT)

Brand Name:	AB-ACCESS
Model Name or Number:	Subscriber Unit (SU)
Unique Type Identification:	UNII Pilot
Serial Number:	Pre-Production 001
Country of Manufacture:	UK
FCC ID Number:	Awaiting Certification from the FCC
Date of Receipt:	26 March 1999

Brand Name:	AB-ACCESS
Model Name or Number:	SU and AP 'Wall-Box'
Unique Type Identification:	RJ45
Serial Number:	Pre-Production 001
Country of Manufacture:	UK
FCC ID Number:	Awaiting Certification from the FCC
Date of Receipt:	26 March 1999

Brand Name:	Sinpro Electronic co. Ltd
Description	DC Power Supply Unit
Model Name or Number:	SPU50-9
Unique Type Identification:	None stated by client
Serial Number:	120671
Country of Manufacture:	Taiwan
FCC ID Number:	Awaiting Certification from the FCC
Date of Receipt:	26 March 1999

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2.2. Description Of EUT

AB-ACCESS is targeted at providing high speed wireless internet access in the recently assigned FCC U-NII bands between 5GHz and 6GHz. AB-ACCESS adopts a cellular structure consisting of base stations (Access Point [AP]) servicing many users. It is a fixed access, point to multipoint infrastructure. The product is targeted at the US market only.

Users are equipped with wall/roof-top/chimney mounted Subscriber Units (SU) that have a line sight link back to the AP. The SU is again fitted with a high gain, directional integral antenna having a 20 degree 3dB beamwidth. Power and data (bi-directional) are routed via braid and foiled screened, quad twisted pair, Cat-5 data cable from an internally mounted wall-box (similar in construction to a telephone outlet socket) up to the SU antenna unit. Power and data status is also routed via this cable. Power is provided to the wall-box via a standard FCC approved 48V DC supply. The wall-box provides Ethernet connectivity via the RJ45 socket to the users PC.

2.3. Modifications Incorporated In EUT

The EUT has been modified so that it can be driven from a PC test script enabling worst case conditions for FCC requirements to be evaluated and tested for compliance. This modification is purely a software driver. AB-ACCESS employs a rapid TDD (Time Divisions Duplex) air interface based on ATM (Asynchronous Transfer Mode) networking protocols - data is transmitted asynchronously on demand and as such there is no discernible duty from which 'averaged' measurements can be taken. The following test modes have been implemented:

Continuous Transmit – this enables worst case EIRP and PSD to be measured, the unit is set for maximum transmit power.

Continuous Receive – There may be some fundamental frequency components that exceed the switch receive test-mode, again the unit is set to maximum receive gain.

Bursted Receive - to measure worst radiated and conducted EMC in receive mode. A predetermined duty cycle will be used, the unit is set for maximum receive gain.

Maximum Transmit Power - this is worst case for switching transients creating spurious emissions – EMC radiated and conducted. As above, a predetermined duty cycle will be used, as before the unit is set for maximum transmits power.

Within each of these modes we can change the operating channel as desired by means of the PC controller.

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2.4. Additional Information Related To Testing

Power Supply Requirement:	115 V, 60 Hz AC Mains to PSU 48 VDC from PSU to EUT
Current Rating	830mA
Intended Operating Environment:	SU antenna units are mounted outside, operational range is -20 to +50 degrees Celsius. "Wall-box" units and PSUs are mounted internally to users buildings/office/home.
Weight:	SU antenna unit 3.5 Kg max
Dimensions:	SU = 260mm (h) x 250mm (w) x 80mm (d)
Interface Ports:	'Wall-box' RJ45 socket – Ethernet / ATM available
Type of Device	Fixed Access Wireless Internet System
Antenna Details	Permanently Attached
Occupied Bandwidth	17 MHz
Type of Modulation	QPSK at 25Mbits/sec, raised cosine filter ($\alpha = 0.35$)
Number of Tx Channels	15 Channels of 15 MHz, 5 channels in each U-NII Band
Method of Frequency Generation	Synthesiser
Category of Receiver	Superheterodyne

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2.5. Support Equipment

The following support equipment was used to exercise the EUT during testing:

Description:	PC
Brand Name:	Dell
Model Name or Number:	Latitude
Serial Number:	DP/N0009321C - 12800 - 8BM2910 - ZL6D8
FCC ID Number:	None stated by client
Cable Length And Type:	6m Ethernet UTP
Connected to Port:	Wall-Box

Description:	PSU for PC
Brand Name:	Dell
Model Name or Number:	PA-2
Serial Number:	DP/N 0085391 REV A01
FCC ID Number:	None stated by client
Cable Length And Type:	1m DC
Connected to Port:	PC Input

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3. Test Specification, Methods And Procedures

3.1. Test Specification

Reference:	FCC Part 15 Subpart E: 1998
Title:	Code of Federal Regulations, Part 15 (47CFR15) Radio Frequency Devices: Digital Devices. Subpart E: Unlicensed National Information Infrastructure Devices
Comments:	A description of the test facility used for this test is on file with, and has been accepted by, the Federal Communications Commission as required by Section 2.948 of Federal Rules.
Purpose of Test:	To determine whether the equipment complied with the requirements of the specification for the purposes of certification.

3.2. Methods And Procedures

The methods and procedures used were as detailed in:

ANSI C63.2 (1987)

Title: American National Standard for Instrumentation - Electromagnetic noise and field strength.

ANSI C63.4 (1992)

Title: American National Standard Methods of Measurement of Electromagnetic Emissions from Low Voltage Electrical and Electronic Equipment in the Range of 9 kHz to 40 GHz.

ANSI C63.5 (1988)

Title: American National Standard for the Calibration of antennas used for Radiated Emission measurements in Electromagnetic Interference (EMI) control.

ANSI C63.7 (1988)

Title: American National Standard Guide for Construction of Open Area Test Sites for performing Radiated Emission Measurements.

CISPR 16 (1987)

Title: Specification for Radio Interference measuring apparatus and measurement methods.

3.3. Definition Of Measurement Equipment

The measurement equipment used complied with the requirements of the standards referenced in the Methods & Procedures section above. Appendix 1 contains a list of the test equipment used.

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4. Deviations From The Test Specification

None

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5. Operation Of The EUT During Testing

5.1. Operating Conditions

The EUT was tested in a normal laboratory environment.

During testing, the EUT was powered by a 48 V DC Supply from the PSU. The PSU was powered from a 115 V, 60 Hz AC Mains supply.

5.2. Operating Modes

The EUT was tested in the following operating mode:

Continuous and Maximum Transmit Power for transmitter tests to FCC Part 15 Subpart E (15.407).

Continuous and bursted receive for receiver tests to FCC Part 15 Subpart B.

For both transmit and receive modes, tests were performed with the EUT set to the following channels for each of the 3 operating bands.

Bottom Band: 5.15 to 5.25 GHz: Bottom Channel (Channel 0) 5.17 GHz

Top Channel (Channel 4) 5.23 GHz

Middle Band: 5.25 to 5.35 GHz: Bottom Channel (Channel 5) 5.27 GHz

Top Channel (Channel 9) 5.33 GHz

Top Band: 5.725 to 5.825 GHz: Bottom Channel (Channel 10) 5.745 GHz

Top Channel (Channel 14) 5.805 GHz

The reason for choosing this mode was that it was defined by the client as being likely to be the worst case with regards EMC.

5.3. Configuration And Peripherals

The EUT was tested in the following configuration: The SU antenna unit is connected via S-FTP-Cat5 cable to the wall-box. The power was supplied from the PSU to the wall-box. Data was controlled from the support PC to the wall-box via UTP-Cat5 Ethernet cables.

The reason for choosing this configuration was that it was defined by the client as being likely to be the worst case with regards EMC and typical of an installation at a users home / office.

NB Section 2 of this report contains a full list of support equipment used and Appendix 3 contains a schematic diagram of the test configuration.

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6. Summary Of Test Results

6.1. Transmitter Tests

Range Of Measurements	Specification Reference	Compliancy Status
AC Powerline Conducted Emissions, 450 kHz to 30 MHz	Section 15.407 (b5) of C.F.R. 47: 1998. (Section 15.207)	Complied
Effective Isotropic Radiated Power Levels, 5 GHz to 6 GHz	Section 15.407 (a) of C.F.R. 47: 1998.	Complied
Electric Field Strength Spurious Emissions, 30 MHz to 1000 MHz	Section 15.407 (b5) of C.F.R. 47: 1998 (Section 15.209)	Complied
Effective Isotropic Radiated Power Spurious Emissions, 1 GHz to 40 GHz	Section 15.407 (b1/2/3) of C.F.R. 47: 1998.	Complied
Frequency Stability -20°C to +50°C 85% to 115% VAC @ 20°C	Section 15.407 (g) of C.F.R. 47: 1997	Complied

6.2. Receiver Tests

Range Of Measurements	Specification Reference	Compliancy Status
AC Powerline Conducted Emissions, 450 kHz to 30 MHz	Section 15.107 Class B of C.F.R. 47: 1998.	Complied
Electric Field Strength Spurious Emissions, 30 MHz to 26000 MHz	Section 15.109 Class B of C.F.R. 47: 1998	Complied

6.3. Location Of Tests

All the measurements described in this report were performed at the premises of Radio Frequency Investigation Ltd, Ewhurst Park, Ramsdell, Basingstoke, Hampshire, RG26 5RQ, England.

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7. Measurements, Examinations And Derived Results

7.1. General Comments

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- 7.1.1. This section contains test results only. Details of the test methods and procedures can be found in Appendix 2 of this report.
- 7.1.2. The measurement uncertainties stated were calculated in accordance with the requirements of NAMAS Document NIS 81 with a confidence level of 95%. Please refer to Section 8 for details of measurement uncertainties.

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7.2. Test Results For AC Mains Conducted Emissions: Receive Mode

7.2.1. Quasi-Peak Detector Measurements On Live And Neutral Lines

7.2.1.1. Measurements were performed to FCC Part 15.107 Class B (Unintentional Radiators)

- 7.2.1.2. Plots of the initial scans can be found in Appendix 4.
- 7.2.1.3. Preliminary conducted spurious emission scans were performed with the EUT set to all 6 channels stated in section 5.2. These preliminary scans showed similar emission levels for each of the channels. Therefore final conducted emission measurements were performed with the EUT set to Top Band Top Channel (Channel 14).
- 7.2.1.4. The following table lists frequencies at which emissions were measured using a Quasi-Peak detector:

Top Band Top Channel (Channel 14)

Frequency (MHz)	Line	Q-P Level (dBm/)	Q-P Limit (dB m /)	Margin (dB)	Result
0.658	Live	36.0	48.0	12.0	Complied
0.658	Neutral	35.8	48.0	12.2	Complied
0.846	Live	45.9	48.0	2.1	Complied
0.846	Neutral	46.4	48.0	1.6	Complied
0.941	Live	46.0	48.0	2.0	Complied
0.941	Neutral	46.8	48.0	1.2	Complied
2.632	Live	34.1	48.0	13.9	Complied
2.632	Neutral	33.6	48.0	14.4	Complied
7.405	Live	22.0	48.0	26.0	Complied
7.405	Neutral	24.0	48.0	24.0	Complied
19.539	Live	22.2	48.0	25.8	Complied
19.539	Neutral	25.2	48.0	22.8	Complied

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7.2.2. Test Results For AC Mains Conducted Emissions: Receive Mode (continued)

7.2.2.1. Further to section 7.2.1, additional measurements were performed on frequencies within 6dB of the limit with the EUT set to each of the other 5 operating channels.

Bottom Band Bottom Channel (Channel 0)

Frequency (MHz)	Line	Q-P Level (dBmV)	Q-P Limit (dBm/)	Margin (dB)	Result
0.846	Live	45.9	48.0	2.1	Complied
0.846	Neutral	46.4	48.0	1.6	Complied
0.941	Live	46.7	48.0	1.3	Complied
0.941	Neutral	47.1	48.0	0.9	Complied

Bottom Band Top Channel (Channel 4)

Frequency (MHz)	Line	Q-P Level (dBm/)	Q-P Limit (dB m /)	Margin (dB)	Result
0.846	Live	45.9	48.0	2.1	Complied
0.846	Neutral	46.4	48.0	1.4	Complied
0.941	Live	46.7	48.0	1.3	Complied
0.941	Neutral	47.1	48.0	0.9	Complied

Middle Band Bottom Channel (Channel 5)

Frequency (MHz)	Line	Q-P Level (dBm/)	Q-P Limit (dB m /)	Margin (dB)	Result
0.846	Live	45.9	48.0	2.1	Complied
0.846	Neutral	46.4	48.0	1.6	Complied
0.941	Live	46.7	48.0	1.3	Complied
0.941	Neutral	47.1	48.0	0.9	Complied

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7.2.3. Test Results For AC Mains Conducted Emissions: Receive Mode (continued)

Middle Band Top Channel (Channel 9)

Frequency (MHz)	Line	Q-P Level (dBm/)	Q-P Limit (dB ml /)	Margin (dB)	Result
0.846	Live	45.8	48.0	2.2	Complied
0.846	Neutral	46.4	48.0	1.6	Complied
0.941	Live	46.7	48.0	1.3	Complied
0.941	Neutral	47.1	48.0	0.9	Complied

Top Band Bottom Channel (Channel 10)

Frequency (MHz)	Line	Q-P Level (dBm/)	Q-P Limit (dB m /)	Margin (dB)	Result
0.846	Live	45.9	48.0	2.1	Complied
0.846	Neutral	46.4	48.0	1.6	Complied
0.941	Live	46.7	48.0	1.3	Complied
0.941	Neutral	47.0	48.0	1.0	Complied

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7.3. Test Results For AC Mains Conducted Emissions: Transmit Mode

7.3.1. Quasi-Peak Detector Measurements On Live And Neutral Lines

7.3.1.1. Measurements were performed to FCC Part 15.207 (Intentional Radiators)

7.3.1.2. Plots of the initial scans can be found in Appendix 4.

7.3.1.3. Preliminary conducted spurious emission scans were performed with the EUT set to all 6 channels stated in section 5.2. These preliminary scans showed similar emission levels for each of the channels. Therefore final conducted emission measurements were performed with the EUT set to Top Band Top Channel (Channel 14).

7.3.1.4. The following table lists frequencies at which emissions were measured using a Quasi-Peak detector:

Top Band Top Channel (Channel 14)

Frequency (MHz)	Line	Q-P Level (dBm/)	Q-P Limit (dB m /)	Margin (dB)	Result
0.658	Live	35.7	48.0	12.3	Complied
0.658	Neutral	36.4	48.0	11.6	Complied
0.846	Live	45.9	48.0	2.1	Complied
0.846	Neutral	46.4	48.0	1.6	Complied
0.941	Live	45.4	48.0	2.6	Complied
0.941	Neutral	45.9	48.0	2.1	Complied
2.632	Live	34.1	48.0	13.9	Complied
2.632	Neutral	32.3	48.0	15.7	Complied
7.405	Live	21.3	48.0	26.7	Complied
7.405	Neutral	29.5	48.0	18.5	Complied
19.539	Live	25.2	48.0	22.8	Complied
19.539	Neutral	28.1	48.0	19.9	Complied

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7.3.2. Test Results For AC Mains Conducted Emissions: Transmit Mode (continued)

7.3.2.1. Further to section 7.3.1, additional measurements were performed on frequencies within 6dB of the limit with the EUT set to each of the other 5 operating channels.

Bottom Band Bottom Channel (Channel 0)

Frequency (MHz)	Line	Q-P Level (dBm/)	Q-P Limit (dB m /)	Margin (dB)	Result
0.846	Live	45.9	48.0	2.1	Complied
0.846	Neutral	46.1	48.0	1.9	Complied
0.941	Live	45.5	48.0	2.5	Complied
0.941	Neutral	46.0	48.0	2.0	Complied

Bottom Band Top Channel (Channel 4)

Frequency (MHz)	Line	Q-P Level (dBm/)	Q-P Limit (dB m /)	Margin (dB)	Result
0.846	Live	45.9	48.0	2.1	Complied
0.846	Neutral	46.1	48.0	1.9	Complied
0.941	Live	45.5	48.0	2.5	Complied
0.941	Neutral	46.0	48.0	2.0	Complied

Middle Band Bottom Channel (Channel 5)

Frequency (MHz)	Line	Q-P Level (dBm/)	Q-P Limit (dB m /)	Margin (dB)	Result
0.846	Live	45.9	48.0	2.1	Complied
0.846	Neutral	46.1	48.0	1.9	Complied
0.941	Live	45.5	48.0	2.5	Complied
0.941	Neutral	46.0	48.0	2.0	Complied

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7.3.3. Test Results For AC Mains Conducted Emissions: Transmit Mode (continued)

Middle Band Top Channel (Channel 9)

Frequency (MHz)	Line	Q-P Level (dBm/)	Q-P Limit (dBm/)	Margin (dB)	Result
0.846	Live	45.9	48.0	2.1	Complied
0.846	Neutral	46.1	48.0	1.9	Complied
0.941	Live	45.5	48.0	2.5	Complied
0.941	Neutral	46.0	48.0	2.0	Complied

Top Band Bottom Channel (Channel 10)

Frequency (MHz)	Line	Q-P Level (dBm/)	Q-P Limit (dB m /)	Margin (dB)	Result
0.846	Live	45.9	48.0	2.1	Complied
0.846	Neutral	46.1	48.0	1.9	Complied
0.941	Live	45.5	48.0	2.5	Complied
0.941	Neutral	46.0	48.0	2.0	Complied

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7.4. Test Results For Radiated Emissions: Receive Mode

7.4.1. Electric Field Strength Measurements: 30 MHz to 1000 MHz

- 7.4.1.1. Measurements were performed to FCC Part 15.109 Class B (Unintentional Radiators)
- 7.4.1.2. The client has stated that the highest clock frequency for the EUT was 4.9025 GHz. Therefore tests were performed up to 26.0 GHz.
- 7.4.1.3. Preliminary radiated spurious emission scans were performed with the EUT set to all 6 channels stated in section 5.2. These preliminary scans showed similar emission levels for each of the channels. Therefore final radiated emission measurements were performed with the EUT set to Middle Band Top Channel (Channel 9).
- 7.4.1.4. Plots of the initial scans can be found in Appendix 4.
- 7.4.1.5. The following table lists frequencies at which emissions were measured using a Quasi-Peak detector at a test distance of 3m (results incorporate antenna factors and cable losses):

Middle Band Top Channel (Channel 9)

Frequency (MHz)	Ant. Pol.	Q-P Level (dBm//m)	Q-P Limit (dBm//m)	Margin (dB)	Result
44.944	Vert.	28.0	40.0	12.0	Complied
50.000	Vert.	37.5	40.0	2.5	Complied
58.352	Vert.	17.9	40.0	22.1	Complied
66.826	Vert.	27.6	40.0	12.4	Complied
120.005	Vert.	25.5	43.5	18.0	Complied
133.651	Horiz.	23.5	43.5	20.0	Complied
150.000	Vert.	30.6	43.5	12.9	Complied
160.000	Vert.	27.2	43.5	16.3	Complied
168.023	Horiz.	33.0	43.5	10.5	Complied
200.000	Vert.	30.9	43.5	12.6	Complied
350.000	Vert.	43.7	46.0	2.3	Complied
400.000	Vert.	40.8	46.0	5.2	Complied
432.060	Vert.	39.5	46.0	6.5	Complied
480.169	Vert.	38.1	46.0	7.9	Complied

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7.4.2. Test Results For Radiated Emissions: Receive Mode (continued)

7.4.2.1. Further to section 7.6.1, additional measurements were performed on frequencies within 6dB of the limit with the EUT set to each of the 2 other operating channels.

Bottom Band Bottom Channel (Channel 0)

Frequency (MHz)	Ant. Pol.	Q-P Level (dBm//m)	Q-P Limit (dBm//m)	Margin (dB)	Result
50.000	Vert.	35.2	40.0	4.8	Complied
350.000	Vert.	44.9	46.0	1.1	Complied
400.000	Vert.	41.3	46.0	4.7	Complied

Top Band Top Channel (Channel 14)

Frequency (MHz)	Ant. Pol.	Q-P Level (dBm//m)	Q-P Limit (dBm//m)	Margin (dB)	Result
50.000	Vert.	35.0	40.0	5.0	Complied
350.000	Vert.	44.9	46.0	1.1	Complied
400.000	Vert.	41.4	46.0	4.6	Complied

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7.5. Test Results For Radiated Emissions: Receive Mode

7.5.1. Electric Field Strength Measurements: 1 GHz to 26 GHz

- 7.5.1.1. Measurements were performed to FCC Part 15.109 Class B (Unintentional Radiators).
- 7.5.1.2. The client has stated that the highest clock frequency for the EUT was 4.9025 GHz. Therefore tests were performed up to 26.0 GHz.
- 7.5.1.3. Preliminary radiated spurious emission scans were performed with the EUT set to all 6 channels stated in section 5.2. Final radiated emission measurements were performed only if the preliminary scan showed any spurious emissions to be within 10dB of the reference limit line.
- 7.5.1.4. At higher frequencies, due to the limitations of the dynamic range of the measuring receiver it was not possible to perform radiated emission preliminary scans and final measurements at the specified 3m test distance. Therefore the measuring antenna was moved to a test distance of 1m. The limit was extrapolated using the factor 20 log (d1/d2).
- 7.5.1.5. Plots of the initial scans can be found in Appendix 4.
- 7.5.1.6. The following tables list frequencies at which emissions were measured using Average and Peak detector functions at a test distance of 1m:

Middle Band Bottom Channel (Channel 5)

Frequency (GHz)	Antenna Polarity (H/V)	Average Detector level (dBmV)	Antenna factor (dB)	Cable loss (dB)	Actual Average Level (dBmV/m)	Average Limit (dB m //m)	Average Margin (dB)	Result
8.753014	Vert.	23.5	30.5	2.1	56.1	63.5	7.4	Complied
8.753014	Horiz.	15.8	30.5	2.1	48.4	63.5	15.1	Complied

Frequency (GHz)	Antenna Polarity (H/V)	Peak Detector level (dBmV)	Antenna factor (dB)	Cable loss (dB)	Actual Peak Level (dBml/m)	Peak Limit (dB m //m)	Peak Margin (dB)	Result
8.753014	Vert.	27.7	30.5	2.1	60.3	83.5	23.2	Complied
8.753014	Horiz.	24.2	30.5	2.1	56.8	83.5	26.7	Complied

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7.5.2. Test Results For Radiated Emissions: Receive Mode (continued)

Middle Band Top Channel (Channel 9)

Frequency (GHz)	Antenna Polarity (H/V)	Average Detector level (dBmV)	Antenna factor (dB)	Cable loss (dB)	Actual Average Level (dBml/m)	Average Limit (dB m //m)	Average Margin (dB)	Result
8.855013	Vert.	17.4	30.5	2.1	50.0	63.5	13.5	Complied
8.855013	Horiz.	14.2	30.5	2.1	46.8	63.5	16.7	Complied

Frequency (GHz)	Antenna Polarity (H/V)	Peak Detector level (dBm/)	Antenna factor (dB)	Cable loss (dB)	Actual Peak Level (dBml/m)	Peak Limit (dB m V/m)	Peak Margin (dB)	Result
8.855013	Vert.	25.6	30.5	2.1	58.2	83.5	25.3	Complied
8.855013	Horiz.	21.6	30.5	2.1	54.2	83.5	29.3	Complied

Bottom Band Bottom Channel (Channel 0)

Frequency (GHz)	Antenna Polarity (H/V)	Average Detector level (dBm/)	Antenna factor (dB)	Cable loss (dB)	Actual Average Level (dBm//m)	Average Limit (dB m //m)	Average Margin (dB)	Result
16.588307	Vert.	13.3	33.6	3.9	50.8	63.5	12.7	Complied
16.588307	Horiz.	13.3	33.6	3.9	50.8	63.5	12.7	Complied

Frequency (GHz)	Antenna Polarity (H/V)	Peak Detector level (dBmV)	Antenna factor (dB)	Cable loss (dB)	Actual Peak Level (dB ml //m)	Peak Limit (dB m //m)	Peak Margin (dB)	Result
16.588307	Vert.	24.2	33.6	3.9	61.7	83.5	21.8	Complied
16.588307	Horiz.	24.2	33.6	3.9	61.7	83.5	21.8	Complied

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7.6. Test Results For Radiated Emissions: Transmit Mode

7.6.1. Electric Field Strength Measurements: 30 MHz to 1000 MHz

- 7.6.1.1. Measurements were performed to FCC Part 15.209 (Intentional Radiators)
- 7.6.1.2. Preliminary radiated spurious emission scans were performed with the EUT set to all 6 channels stated in section 5.2. These preliminary scans showed similar emission levels for each of the channels. Therefore final radiated emission measurements (below 1000 MHz) were performed with the EUT set to Top Band Top Channel (Channel 14).
- 7.6.1.3. Plots of the initial scans can be found in Appendix 4.
- 7.6.1.4. The following table lists frequencies at which emissions were measured using a Quasi-Peak detector at a test distance of 3m (results incorporate antenna factors and cable losses):

Top Band Top Channel (Channel 14)

Frequency (MHz)	Ant. Pol.	Q-P Level (dBmV/m)	Q-P Limit (dB ml/ /m)	Margin (dB)	Result
46.006	Vert.	32.3	40.0	7.7	Complied
50.000	Vert.	34.4	40.0	5.6	Complied
61.413	Vert.	27.4	40.0	12.6	Complied
66.826	Vert.	29.5	40.0	10.5	Complied
100.000	Vert.	36.6	43.5	6.9	Complied
114.347	Horiz.	30.1	43.5	13.4	Complied
120.008	Vert.	24.0	43.5	19.5	Complied
133.652	Vert.	23.5	43.5	20.0	Complied
150.000	Vert.	31.1	43.5	12.4	Complied
160.000	Vert.	28.1	43.5	15.4	Complied
175.000	Vert.	34.2	43.5	9.3	Complied
200.000	Vert.	33.9	43.5	9.6	Complied
300.000	Vert.	40.0	46.0	6.0	Complied
325.000	Horiz.	23.8	46.0	22.2	Complied
350.000	Vert.	45.1	46.0	0.8	Complied
400.000	Vert.	39.6	46.0	6.4	Complied
425.000	Vert.	38.9	46.0	7.1	Complied
450.000	Vert.	37.4	46.0	8.6	Complied
475.000	Vert.	33.6	46.0	12.4	Complied

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7.6.2. Test Results For Radiated Emissions: Transmit Mode (continued)

7.6.2.1. Further to section 7.8.1, additional measurements were performed on frequencies within 6dB of the limit with the EUT set to each of the 2 other operating channels.

Bottom Band Bottom Channel (Channel 0)

Frequency (MHz)	Ant. Pol.	Q-P Level (dBm//m)	Q-P Limit (dB m //m)	Margin (dB)	Result
50.000	Vert.	35.6	40.0	4.4	Complied
350.000	Vert.	44.2	46.0	1.8	Complied
400.000	Vert.	41.9	46.0	4.1	Complied

Middle Band Top Channel (Channel 9)

Frequency (MHz)	Ant. Pol.	Q-P Level (dBm//m)	Q-P Limit (dBm//m)	Margin (dB)	Result
50.000	Vert.	35.6	40.0	4.4	Complied
350.000	Vert.	45.7	46.0	0.3	Complied
400.000	Vert.	43.9	46.0	2.1	Complied

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7.7. Test Results For Radiated Emissions: Transmit Mode

7.7.1. Effective Isotropic Radiated Power Measurements: 5.0 GHz to 6.0 GHz.

- 7.7.1.1. Measurements were performed to FCC Part 15.407(a) (Unlicensed National Information Infrastructure Devices).
- 7.7.1.2. The client has stated that the EUT operated in the frequency ranges of 5.15 to 5.25 GHz, 5.25 to 5.35 GHz, and 5.725 to 5.825 GHz. Measurements were performed at both bottom and top channels within each band.
- 7.7.1.3. The EUT was configured with a permanently connected antenna. The client has stated that the directional gain of the antenna is 18dBi. EIRP measurements were performed to determine the output power levels of the EUT, and the limit was increased by 6dB to compensate for the antenna being connected. The specified limit includes the 6dB antenna gain.
- 7.7.1.4. It was possible to polarise the antenna incorporated within the EUT for both vertical and horizontal polarisation's. Therefore EIRP measurements were performed with the antenna polarised in both planes.
- 7.7.1.5. Results are shown for the EUT operating on each of the 6 channels stated in section 5.2. Measurements are shown for both transmit power levels and peak power spectral density. Plots showing the characteristics of the transmitter output can be seen in Appendix 4.
- 7.7.1.6. In addition to the measurements stated in section 7.10.1.5, additional results were calculated for the ratio of the peak excursion of the modulation envelope as stated in FCC Part 15.407(a[6]).

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Results: Peak Transmit Power Levels

Tx Band (GHz)	Channel	Tx Antenn a	Measured Peak EIRP (dBm)	Limit (dBm) (Includes 6dBi Antenna Gain for EIRP)	Bandwidth (MHz)	Plot No.	Result
5.15 - 5.25	Bottom (0)	Horiz.	15.41	22.29	16.9444	075	Complied
5.15 – 5.25	Bottom (0)	Vert.	14.35	22.29	16.9444	076	Complied
5.15 – 5.25	Top (4)	Vert.	15.59	22.29	16.8333	077	Complied
5.15 – 5.25	Top (4)	Horiz.	17.09	22.29	16.8333	078	Complied
5.25 - 5.35	Bottom (5)	Horiz.	23.99	29.26	16.8333	079	Complied
5.25 - 5.35	Bottom (5)	Vert.	26.00	29.26	16.8333	080	Complied
5.25 – 5.35	Top (9)	Vert.	25.14	29.20	16.6111	081	Complied
5.25 – 5.35	(Top (9)	Horiz.	24.12	29.22	16.6666	082	Complied
5.725 - 5.825	Bottom (10)	Horiz.	29.91	35.28	16.8888	083	Complied
5.725 - 5.825	Bottom (10)	Vert.	30.87	35.28	16.8888	084	Complied
5.725 - 5.825	Top (14)	Vert.	30.75	35.22	16.6666	085	Complied
5.725 – 5.825	Top (14)	Horiz.	29.58	35.22	16.6666	086	Complied

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Results: Peak Power Spectral Density (PPSD)

Tx Band (GHz)	Channel	Tx Antenna	Measured PPSD (EIRP) (dBm/MHz)	Limit (dBm/MHz) (Includes 6dBi Antenna Gain for EIRP)	Plot No.	Result
5.15 – 5.25	Bottom (0)	Horiz	9.2	10.0	075	Complied
5.15 – 5.25	Bottom (0)	Vert.	7.6	10.0	076	Complied
5.15 – 5.25	Top (4)	Vert.	7.2	10.0	077	Complied
5.15 – 5.25	Top (4)	Horiz.	8.3	10.0	078	Complied
5.25 – 5.35	Bottom (5)	Horiz.	16.4	17.0	079	Complied
5.25 – 5.35	Bottom (5)	Vert.	16.8	17.0	080	Complied
5.25 – 5.35	Top (9)	Vert.	16.8	17.0	081	Complied
5.25 – 5.35	Top (9)	Horiz.	15.8	17.0	082	Complied
5.725 - 5.825	Bottom (10)	Horiz.	22.0	23.0	083	Complied
5.725 - 5.825	Bottom (10)	Vert.	22.3	23.0	084	Complied
5.725 - 5.825	Top (14)	Vert.	22.6	23.0	085	Complied
5.725 - 5.825	Top (14)	Horiz.	21.9	23.0	086	Complied

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Results: Ratio of Peak Excursion of the Modulation Envelope

Tx Band (GHz)	Channel	Tx Ant	Measured Peak EIRP (dBm)	Measured PPSD (EIRP) (dBm/ MHz)	Ratio: Peak Excursion	Limit (dB)	Result
5.15 – 5.25	Bottom (0)	Horiz	15.41	9.2	6.21	13.0	Complied
5.15 – 5.25	Bottom (0)	Vert.	14.35	7.6	6.75	13.0	Complied
5.15 – 5.25	Top (4)	Vert.	15.59	7.2	8.39	13.0	Complied
5.15 – 5.25	Top (4)	Horiz.	17.09	8.3	8.79	13.0	Complied
5.25 - 5.35	Bottom (5)	Horiz.	23.99	16.4	7.59	13.0	Complied
5.25 – 5.35	Bottom (5)	Vert.	26.00	16.8	9.20	13.0	Complied
5.25 - 5.35	Top (9)	Vert.	25.14	16.8	8.34	13.0	Complied
5.25 – 5.35	Top (9)	Horiz.	24.12	15.8	8.32	13.0	Complied
5.725 - 5.825	Bottom (10)	Horiz.	29.91	22.0	7.91	13.0	Complied
5.725 - 5.825	Bottom (10)	Vert.	30.87	22.3	8.57	13.0	Complied
5.725 - 5.825	Top (14)	Vert.	30.75	22.6	8.15	13.0	Complied
5.725 - 5.825	Top (14)	Horiz.	29.58	21.9	7.68	13.0	Complied

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7.8. Test Results For Radiated Emissions: Transmit Mode

<u>7.8.1. Effective Isotropic Radiated Power Spurious Measurements: 1.0 GHz to 40.0 GHz.</u>

- 7.8.1.1. Measurements were performed to FCC Part 15.407(b) (Unlicensed National Information Infrastructure Devices).
- 7.8.1.2. The client has stated that the highest clock frequency for the EUT was 5.825 GHz. Therefore tests were performed up to 40.0 GHz.
- 7.8.1.3. Preliminary EIRP scans were performed with the EUT operating on each of the 6 channels stated in section 5.2. Plots showing the spurious (undesirable) emission levels can be seen in Appendix 4.
- 7.8.1.4. The EUT was configured with a permanently connected antenna. It was possible to polarise the antenna for both vertical and horizontal polarisation's. Therefore EIRP measurements were performed with the antenna polarised in both planes.

Results:

- 7.8.1.5. Preliminary scans were performed with the EUT operated on each of the 6 channels stated in section 5.2. It can be shown from the plots (Plots 087 to 158) that all emissions outside of the transmitter band edges are of at least 6dB from the reference limit line. Therefore no final measurements were performed.
- 7.8.1.6. All preliminary scans (Plots 087 to 158) can be seen in Appendix 4.

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7.9. Test Results For Frequency Stability: Transmit Mode

7.9.1. Measurements for frequency stability were performed in accordance with FCC Part 15.407 (g) of C.F.R. 47:1997.

- 7.9.2. Measurements were performed over the temperature range of -20°C to +50°C at the nominal operating voltage, and over an operating voltage of 85% to 115% at +20°C.
- 7.9.3. The client has specified that due to the transmission of broadband data centred around the nominal carrier frequency of the EUT, measurements of any 'drift' are virtually impossible. However valid measurements would be possible by observing the drift on the main local oscillator, which is 902.5 MHz below the nominal centre frequency. All oscillators within the EUT are referenced to a single source and so any drift can be easily quantified. Also due to the integrated nature of the antenna, and its associated gain/frequency response, any 'drift' can be observed whilst operating at the top frequency of the U-NII band (Channel 14).
- 7.9.4. Measurements for frequency drift were performed with the EUT operating on Channel 14. A plot (Plot 169) of the frequency stability was performed, with the EUT supply voltage, varied from 85% to 110%, and then up to 115%. At all times the ambient temperature was maintained at +20°C. A further plot (Plot 170) was performed to show the frequency stability of the EUT, with the ambient temperature varied from -20°C to +20°C, and then to +50°C. The supply voltage to the EUT remained at a constant 115V. The plots of both measurements can be seen in Appendix 4.

Results: Supply Variation

Nominal Operating Frequency	Frequency Do	eviation @ +20	Limit (±10ppm)	Result	
	85% Supply Voltage	100% Supply Voltage	115% Supply Voltage		
4.9025 GHz	< 1 kHz	< 1 kHz	< 1 kHz	49 kHz	Complied

Results: Temperature Variation

Nominal Operating Frequency	Frequency Deviation @ 115 V			Limit (±10ppm)	Result
	-20°C	+20°C	+50°C		
4.9025 GHz	< 1 kHz	< 1 kHz	< 5 kHz	49 kHz	Complied

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8. Measurement Uncertainty

8.1. Company Policy, as based on the NAMAS Accreditation Standard, M10, paragraph 12.11 (o), states that Test Reports shall include estimated uncertainty of the calibration or test result (this information need only appear in test reports and test certificates where it is relevant to the validity or application of the test result, where a client's instructions so require or where uncertainty affects compliance to a specification or limit).

8.2. The global uncertainties have been calculated in accordance with NAMAS NIS 81 (Edition 1, May 1994) as follows:

Measurement Type	Range	Confidence Level	Calculated Uncertainty
Conducted Emissions	0.15 MHz to 30 MHz	95%	+/- 2.2 dB
Radiated Field Strength Emissions	30 MHz to 1000 MHz	95%	+/- 4.9 dB
Radiated Field Strength Emissions	1.0 GHz to 26.0 GHz	95%	+/- 4.0 dB
Effective Isotropic Radiated Power	1.0 GHz to 40.0 GHz	95%	+/- 4.0 dB
Frequency Stability	N/A	95%	+/- 4.2 dB

- 8.3. Measurement uncertainties have been applied in accordance with NAMAS document NIS 81 (edition 1, May 1994), and in the absence of any specification criteria, guidance, or code of practice, compliance has been judged on the basis of shared risk.
- 8.4. In the case of emissions tests, the measured value of the disturbance from the product sample shall be compared directly with the limits. If the measured value is equal to or less than the limit the product is deemed to pass the test.
- 8.5. In the case of immunity tests, the equipment is deemed to pass the test if it fulfils the stated performance criteria at the required or a higher severity level. The measurement uncertainty has been taken into account in the calibration procedures stated in the relevant basic standard.
- 8.6. The methods used to calculate the above uncertainties are in line with those used for calibration laboratories contained in NAMAS document NIS 3003 Edition 8 "The Expression of Uncertainty and Confidence in Measurement" May 1995, which align with international recommendations "Guide to the Expression of Uncertainty in Measurement" ISO/IEC/OIML/BIPM (Prepared by ISO/TAG 4: January 1993).

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Appendix 1. Test Equipment Used

Instrument		Manufacturer	Model	RFI No.				
Conducted Emissions:								
L.I.S.N. (1 ph.)	R	& S	ESH3-Z5	A004				
Pulse Limitter	R	& S	ESH3-Z32	A287				
Test Receiver	R	& S	ESMI	M069				
Plotter	Н.	P.	7440A	P001				
Radiated Electric Field Emissions								
Bilog Antenna	Cł	nase	CBL6111	A259				
3dB Attenuator	Na	arda	771003	A262				
Bilog Antenna	Cł	nase	CBL6111	A490				
Cable	Ro	osenberger	UFA210A-1- 1182-704704	C460				
Cable	Ro	osenberger	UFA210A-1- 1182-704704	C461				
Test Receiver	R	& S	ESVP	M002				
Spectrum Monitor	R	& S	EZM	M003				
Test Receiver	R	& S	ESMI	M069				
1.0 to 2.0 GHz Horn	Ea	aton	9188-2	A028				
2.0 to 4.0 GHz Horn	Ea	aton	91889-2	A031				
4.0 to 6.0 GHz Horn	Fla	ann	12240-20	A428				
6.0 to 8.2 GHz Horn	Na	arda	642	A439				
8.2 to 12.5 GHz Horn	Na	arda	640	A437				
12.5 to 18.0 GHz Horn	Fla	ann	18240-20	A430				
18.0 to 26.0 GHz Horn	Fla	ann	20240-20	A436				

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Test Equipment Used (continued)

Effective Isotropic Radiated Powe	r		
Test Receiver	R & S	ESMI	M069
Cable	Rosenberger	UFA210A-1- 1182-704704	C460
Cable	Rosenberger	UFA210A-1- 1182-704704	C461
1.0 to 2.0 GHz Horn	Eaton	9188-2	A028
2.0 to 4.0 GHz Horn	Eaton	91889-2	A031
4.0 to 6.0 GHz Horn	Flann	12240-20	A428
6.0 to 8.2 GHz Horn	Narda	642	A439
8.2 to 12.5 GHz Horn	Narda	640	A437
12.5 to 18.0 GHz Horn	Flann	18240-20	A430
18.0 to 26.0 GHz Horn	Flann	20240-20	A436
26.0 to 40.0 GHz Horn	Flann	22240-20	A435
Harmonic Mixer	-	-	W152
Frequency Stability			
Test Receiver	R&S	ESMI	M069
Cable	Rosenberger	UFA210A-1- 1182-704704	C460
4.0 to 6.0 GHz Horn	Flann	12240-20	A428
Environmental Test Chamber	Prolan	PV427H75F 30HV	E007

NB In accordance with NAMAS requirements, all the measurement equipment is on a calibration schedule.

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Appendix 2. Measurement Methods

A2.1. AC Mains Conducted Emissions: FCC Part 15

- A2.1.1. AC mains conducted emissions measurements were performed in accordance with the standard, against appropriate limits for each detector function.
- A2.1.2. The test was performed in a shielded enclosure with the equipment arranged as detailed in the standard on a wooden bench using the floor of the screened enclosure as the ground reference plane and with the EUT powered via a 115 V 60 Hz AC mains supply.
- A2.1.3. Initial measurements in the form of swept scans covering the entire measurement band were performed in order to identify frequencies on which the EUT was generating interference. In order to minimise the time taken for these swept measurements, a Peak detector was used in conjunction with the appropriate detector IF measuring bandwidths (see table below). Repetitive scans were performed to allow for emissions with low repetition rates, and the duty cycle of the EUT. The test configuration was the same for the initial scans as for the final measurements.
- A2.1.4. Following the initial scans, a graph was produced giving an overview of the emissions from the EUT plotted against the appropriate specification limit. A tolerance line was set 6 dB below the specification limit and levels above the tolerance line were retested (at individual frequencies) using the appropriate detector function.
- A2.1.5. The test equipment settings for conducted emissions measurements were as follows:

Receiver Function	Initial Scan	Final Measurements
Detector Type:	Peak	Quasi-Peak (CISPR)*
Mode:	Max Hold	Not applicable
Bandwidth:	10 kHz	9 kHz
Amplitude Range:	60 dB	20 dB
Measurement Time:	Not applicable	>1s
Observation Time:	Not applicable	> 15 s
Step Size:	Continuous sweep	Not applicable
Sweep Time:	Coupled	Not applicable

^{*} In some instances an Average detector function may also have been used.

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A2.2. Radiated Field Strength Emissions

A2.2.1. Radiated emissions measurements were performed in accordance with the standard, against appropriate limits for each detector function.

A2.2.2. Initial measurements covering the entire measurement band in the form of swept scans in a shielded enclosure (for frequencies below 4 GHz) or on an open area test site (for frequencies above 4 GHz) were performed in order to identify frequencies on which the EUT was generating interference. This determined the frequencies on which the EUT should be re-measured in full on the open area test site. In order to minimise the time taken for the swept measurements, a Peak detector was used in conjunction with the appropriate detector IF measuring bandwidth (see table below). Repetitive scans were performed to allow for emissions with low repetition rates, and for the duty cycle of the EUT. The test configuration was the same for the initial scans as for the final measurements.

- A2.2.3. The initial scans were performed using an antenna height of 1.5 m and a measurement distance of 3 m. Where (at higher frequencies) the noise floor was found to be of a higher level, a test distance of 1m was used. Following the initial scans, graphs were produced giving an overview of the emissions from the EUT plotted against the appropriate specification limit. A tolerance line was set 6 dB below the specification limit and levels above the tolerance line were re-tested on the open area test site, at the appropriate distance, using a measuring receivers with a Quasi-Peak detector (below 1000 MHz), where applicable, for measurements above 1000 MHz average and peak detectors were used.
- A2.2.4. For the main (final) measurements the EUT was arranged on a non-conducting table on an open area test site, as detailed in the specification.
- A2.2.5. All measurements on the open area test site were performed using broadband antennas.
- A2.2.6. On the open area test site, at each frequency where a signal was found, the levels were maximised by initially rotating the turntable through 360°. In addition, for frequencies below 1000 MHz, the antenna height was varied between 1 and 4 m. For frequencies above 1000 MHz, the antenna was fixed at a height of 1.5m. At this point, any signals found to be between the limit and a level 6 dB below it were further maximised by changing the configuration of the EUT, e.g. re-routing cables to peripherals and moving peripherals with respect to the EUT.

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A2.2.7. The test equipment settings for radiated emissions measurements were as follows:

Receiver Function	Initial Scan Below 1GHz	Final Measurements Below 1GHz
Detector Type:	Peak	Quasi-Peak (CISPR)
Mode:	Max Hold	Not applicable
Bandwidth:	120 kHz	120 kHz
Amplitude Range:	60 dB	20 dB
Measurement Time:	Not applicable	>1s
Observation Time:	Not applicable	> 15 s
Step Size:	Continuous sweep	Not applicable
Sweep Time:	Coupled	Not applicable

Receiver Function	Initial Scan Above 1GHz	Final Measurements Above 1 GHz
Detector Type:	Peak	Peak/Average
Mode:	Max Hold	Not applicable
Bandwidth:	1 MHz	1 MHz
Amplitude Range:	60 dB	20 dB (typical)
Measurement Time:	Not applicable	> 1 s
Observation Time:	Not applicable	> 15 s
Step Size:	Continuous sweep	Not applicable
Sweep Time:	Coupled	Not applicable

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A.2.3. Effective Isotropic Radiated Power Measurements: 5.0 GHz to 6.0 GHz.

- A.2.3.1. Effective Isotropic Radiated Power measurements were performed in accordance with the standard, against the appropriate limits on an open area test site.
- A.2.3.2. The EUT was set to transmit on the required channel at maximum transmit power. The channels stated in section 5.2 were tested. The EUT was configured with a permanently attached antenna. Therefore radiated power measurements were performed.
- A.2.3.3. The EUT was mounted on a non-metallic table at a 1 m test height. The receive (test) antenna was placed at a test distance of 2m. The EUT was set to operate at the required channel and the exact frequency recorded. A substitution measurement was then performed to determine the loss of the test set-up. (Details of the substitution method can be seen in Appendix A.2.6.).
- A.2.3.4. The level recorded for the substitution method was entered as a level offset in the measuring receiver. Initial measurements covering the entire measurement band were performed in the form of a swept scan. In order to minimise the time taken for the swept measurements, a Peak detector was used in conjunction with the appropriate detector IF measuring bandwidth (1MHz). Repetitive scans were performed to allow for emissions with low repetition rates, and for the duty cycle of the EUT. The EUT was rotated through 360° to maximise all emissions. The test was performed with the EUT integral antenna set for both horizontal and vertical polarisations. The test antenna was also set for both polarities.
- A.2.3.5. The measured Peak Transmit Power and the Power Spectral Density could then be determined.
- A.2.3.6. The EUT was set to the next channel and sections A.2.3.2. to A.2.3.5. were repeated.

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A.2.4. Effective Isotropic Radiated Power Spurious Measurements: 1.0 GHz to 40.0 GHz.

- A.2.4.1. Effective Isotropic Radiated Power Spurious measurements were performed in accordance with the standard, against the appropriate limits on an open area test site.
- A.2.4.2. The EUT was set to transmit on the required transmit channel at maximum transmit power. The channels stated in section 5.2 were tested. The EUT was configured with a permanently attached antenna. Therefore radiated power measurements were performed.
- A.2.4.3. The EUT was mounted on a non-metallic table at a 1.5m test height. The receive (test) antenna was placed at a test distance of 2m. For each of the frequency ranges performed, a substitution method was performed to determine the worst case loss of the test set-up. (Details of the substitution method can be seen in Appendix A.2.6.)
- A.2.4.4. The level recorded for the substitution method was entered as a level offset in the measuring receiver. Initial measurements covering the entire measurement band were performed in the form of a swept scan (For frequencies below 4 GHz, initial scans were performed in a shielded enclosure). In order to minimise the time taken for the swept measurements, a Peak detector was used in conjunction with the appropriate detector IF measuring bandwidth (1MHz). Repetitive scans were performed to allow for emissions with low repetition rates, and for the duty cycle of the EUT. The EUT was rotated through 360° to maximise all emissions. The test was performed with the EUT integral antenna set for both horizontal and vertical polarisation. The test antenna was also set for both polarities.
- A.2.4.5. The maximum emission level obtained in dBm/MHz could then be determined. Any levels which were found to be within 6dB of the reference limit line were re-measured with a substitution measurement being performed.
- A.2.4.6. The EUT was set to the next channel and sections A.2.4.2. to A.2.4.5. were repeated.

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A2.5. Frequency Stability

A.2.5.1. Measurements were performed to determine the frequency stability against the specified limits.

A.2.5.2. An environmental test chamber was used to perform the resting required.

A.2.5.3. The EUT was situated inside the environmental test chamber and the required temperature (starting from the lowest level) was allowed to settle prior to switching on the EUT.

- A.2.5.4. The EUT was switched on and the relevant frequency was recorded. The EUT was left switched on and measurements were performed after 2, 5 and 10 minutes.
- A2.5.5. Frequency and RF output power measurements were then made at intervals of one minute for a duration of 10 minutes whilst maintaining the required temperature.
- A2.5.6. The EUT was then switched off for a minimum of 30 minutes and the environmental chamber was allowed to stabilise at the next temperature. Points A2.5.3. to A2.5.5. were then repeated.
- A.2.5.7. The test chamber was then allowed to stabilise at +20°C for a minimum of 30 minutes. The supply voltage was then adjusted on the EUT from 85% to 115% and the frequency recorded.

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A.2.6. Substitution Methods

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A.2.6.1. The equipment is configured as illustrated in Appendix 4.

A.2.6.2. The EUT is replaced by an in-band antenna connected to a signal generator tuned to the frequency of interest. A 10dB attenuator was connected to improve matching.

A.2.6.3. The transmit and receive antennas were vertically polarised at a fixed height of 1.5 metres.

A.2.6.4. The signal generator level is then adjusted to give a level equal to that obtained from the EUT.

A.2.6.5. The radiated power is given by the formula below.

True Signal level = Signal Generator Level - $\sum L + Ag$

where:

 $\sum L$ is the sum of the losses, i.e. cable loss.

Ag is the isotropic gain of the antenna.

A.2.6.6. The measurement shall be repeated for horizontal polarisation.

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Appendix 3. Test Configuration Drawings

This appendix contains the following drawings:

Drawing Reference Number	Title
DRG\38658ETF03\EMICON	Test configuration for measurement of conducted emissions
DRG\38658ETF03\EMIRAD	Test configuration for measurement of radiated emissions
DRG\38658ETF03\001	Schematic diagram of the EUT, support equipment and interconnecting cables used for the test
DRG\38658ETF03\002	Substitution measurement test set-up

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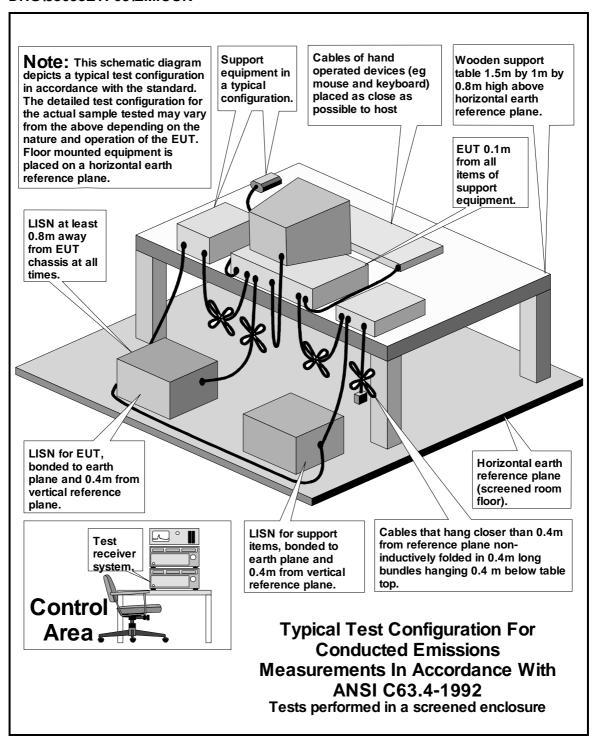
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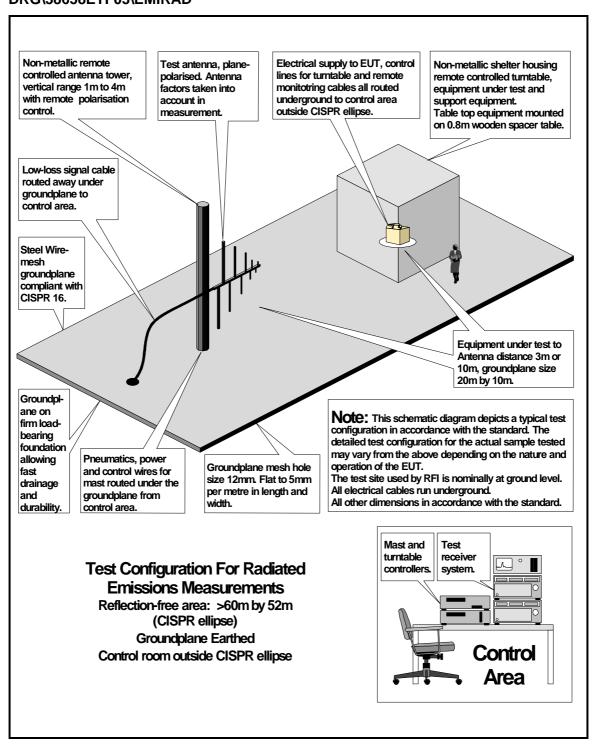
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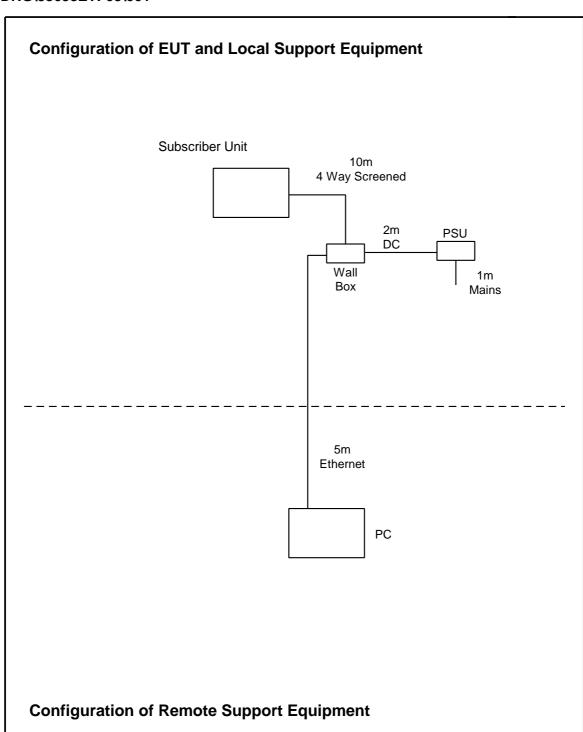
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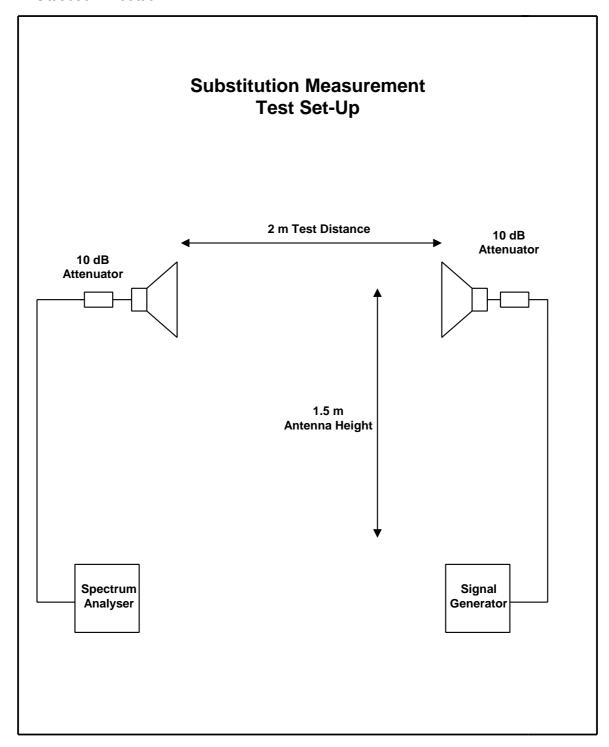
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Appendix 4. Graphical Test Results

This appendix contains the following graphs:

Graph Reference Number	Title
GPH\38658ETF03\001	Scan of Radiated Electric Field: Transmit Mode: 30 to 1000 MHz 5.15 to 5.25 GHz Band. Bottom Channel. (Channel 0)
GPH\\38658ETF03002	Scan of Radiated Electric Field: Transmit Mode: 30 to 1000 MHz 5.15 to 5.25 GHz Band. Top Channel. (Channel 4)
GPH\38658ETF03\003	Scan of Radiated Electric Field: Transmit Mode: 30 to 1000 MHz 5.25 to 5.35 GHz Band. Bottom Channel. (Channel 5)
GPH\38658ETF03004	Scan of Radiated Electric Field: Transmit Mode: 30 to 1000 MHz 5.25 to 5.35 GHz Band. Top Channel. (Channel 9)
GPH\38658ETF03\005	Scan of Radiated Electric Field: Transmit Mode: 30 to 1000 MHz 5.725 to 5.825 GHz Band. Bottom Channel. (Channel 10)
GPH\38658ETF03\006	Scan of Radiated Electric Field: Transmit Mode: 30 to 1000 MHz 5.725 to 5.825 GHz Band. Top Channel. (Channel 14)
GPH\38658ETF03\007	Scan of Radiated Electric Field: Receive Mode: 30 to 1000 MHz 5.15 to 5.25 GHz Band. Bottom Channel. (Channel 0)
GPH\38658ETF03\008	Scan of Radiated Electric Field: Receive Mode: 30 to 1000 MHz 5.15 to 5.25 GHz Band. Top Channel. (Channel 4)
GPH\38658ETF03\009	Scan of Radiated Electric Field: Receive Mode: 30 to 1000 MHz 5.25 to 5.35 GHz Band. Bottom Channel. (Channel 5)
GPH\38658ETF03\010	Scan of Radiated Electric Field: Receive Mode: 30 to 1000 MHz 5.25 to 5.35 GHz Band. Top Channel. (Channel 9)
GPH\38658ETF03\011	Scan of Radiated Electric Field: Receive Mode: 30 to 1000 MHz 5.725 to 5.825 GHz Band. Bottom Channel. (Channel 10)
GPH\38658ETF03\012	Scan of Radiated Electric Field: Receive Mode: 30 to 1000 MHz 5.725 to 5.825 GHz Band. Top Channel. (Channel 14)
GPH\38658ETF03\013	Scan of Conducted Emissions: Receive Mode: 450 kHz to 30 MHz 5.15 to 5.25 GHz Band. Bottom Channel. (Channel 0). Live Line.
GPH\38658ETF03\014	Scan of Conducted Emissions: Receive Mode: 450 kHz to 30 MHz 5.15 to 5.25 GHz Band. Top Channel. (Channel 4). Live Line.
GPH\38658ETF03\015	Scan of Conducted Emissions: Receive Mode: 450 kHz to 30 MHz 5.25 to 5.35 GHz Band. Bottom Channel. (Channel 5). Live Line.
GPH\38658ETF03\016	Scan of Conducted Emissions: Receive Mode: 450 kHz to 30 MHz 5.25 to 5.35 GHz Band. Top Channel. (Channel 9). Live Line.
GPH\38658ETF03\017	Scan of Conducted Emissions: Receive Mode: 450 kHz to 30 MHz 5.725 to 5.825 GHz Band. Bottom Channel. (Channel 10). Live Line.
GPH\38658ETF03\018	Scan of Conducted Emissions: Receive Mode: 450 kHz to 30 MHz 5.725 to 5.825 GHz Band. Top Channel. (Channel 14). Live Line.

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Graph Reference Number	Title
GPH\38658ETF03\019	Scan of Conducted Emissions: Transmit Mode: 450 kHz to 30 MHz 5.15 to 5.25 GHz Band. Bottom Channel. (Channel 0). Live Line.
GPH\38658ETF03\020	Scan of Conducted Emissions: Transmit Mode: 450 kHz to 30 MHz 5.15 to 5.25 GHz Band. Top Channel. (Channel 4). Live Line.
GPH\38658ETF03\021	Scan of Conducted Emissions: Transmit Mode: 450 kHz to 30 MHz 5.25 to 5.35 GHz Band. Bottom Channel. (Channel 5). Live Line.
GPH\38658ETF03\022	Scan of Conducted Emissions: Transmit Mode: 450 kHz to 30 MHz 5.25 to 5.35 GHz Band. Top Channel. (Channel 9). Live Line.
GPH\38658ETF03\023	Scan of Conducted Emissions: Transmit Mode: 450 kHz to 30 MHz 5.725 to 5.825 GHz Band. Bottom Channel. (Channel 10). Live Line.
GPH\38658ETF03\024	Scan of Conducted Emissions: Transmit Mode: 450 kHz to 30 MHz 5.725 to 5.825 GHz Band. Top Channel. (Channel 14). Live Line.
GPH\38658ETF03\025	Scan of Conducted Emissions: Receive Mode: 450 kHz to 30 MHz 5.15 to 5.25 GHz Band. Bottom Channel. (Channel 0). Neutral Line.
GPH\38658ETF03\026	Scan of Conducted Emissions: Receive Mode: 450 kHz to 30 MHz 5.15 to 5.25 GHz Band. Top Channel. (Channel 4). Neutral Line.
GPH\38658ETF03\027	Scan of Radiated Electric Field: Receive Mode: 1000 to 2000 MHz 5.15 to 5.25 GHz Band. Bottom Channel. (Channel 0)
GPH\38658ETF03\028	Scan of Radiated Electric Field: Receive Mode: 1000 to 2000 MHz 5.15 to 5.25 GHz Band. Top Channel. (Channel 4)
GPH\38658ETF03\029	Scan of Radiated Electric Field: Receive Mode: 1000 to 2000 MHz 5.25 to 5.35 GHz Band. Bottom Channel. (Channel 5)
GPH\38658ETF03\030	Scan of Radiated Electric Field: Receive Mode: 1000 to 2000 MHz 5.25 to 5.35 GHz Band. Top Channel. (Channel 9)
GPH\38658ETF03\031	Scan of Radiated Electric Field: Receive Mode: 1000 to 2000 MHz 5.725 to 5.85 GHz Band. Bottom Channel. (Channel 10)
GPH\38658ETF03\032	Scan of Radiated Electric Field: Receive Mode: 1000 to 2000 MHz 5.725 to 5.825 GHz Band. Top Channel. (Channel 14)
GPH\38658ETF03\033	Scan of Radiated Electric Field: Receive Mode: 2000 to 4000 MHz 5.15 to 5.25 GHz Band. Bottom Channel. (Channel 0)
GPH\38658ETF03\034	Scan of Radiated Electric Field: Receive Mode: 2000 to 4000 MHz 5.15 to 5.25 GHz Band. Top Channel. (Channel 4)
GPH\38658ETF03\035	Scan of Radiated Electric Field: Receive Mode: 2000 to 4000 MHz 5.25 to 5.35 GHz Band. Bottom Channel. (Channel 5)
GPH\38658ETF03\036	Scan of Radiated Electric Field: Receive Mode: 2000 to 4000 MHz 5.25 to 5.35 GHz Band. Top Channel. (Channel 9)
GPH\38658ETF03\037	Scan of Radiated Electric Field: Receive Mode: 2000 to 4000 MHz 5.725 to 5.85 GHz Band. Bottom Channel. (Channel 10)

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Graph Reference Number	Title
GPH\38658ETF03\038	Scan of Radiated Electric Field: Receive Mode: 2000 to 4000 MHz 5.725 to 5.825 GHz Band. Top Channel. (Channel 14)
GPH\38658ETF03\039	Scan of Radiated Electric Field: Receive Mode: 4000 to 5000 MHz 5.15 to 5.25 GHz Band. Bottom Channel. (Channel 0)
GPH\38658ETF03\040	Scan of Radiated Electric Field: Receive Mode: 4000 to 5000 MHz 5.15 to 5.25 GHz Band. Top Channel. (Channel 4)
GPH\38658ETF03\041	Scan of Radiated Electric Field: Receive Mode: 4000 to 5000 MHz 5.25 to 5.35 GHz Band. Bottom Channel. (Channel 5)
GPH\38658ETF03\042	Scan of Radiated Electric Field: Receive Mode: 4000 to 5000 MHz 5.25 to 5.35 GHz Band. Top Channel. (Channel 9)
GPH\38658ETF03\043	Scan of Radiated Electric Field: Receive Mode: 4000 to 5000 MHz 5.725 to 5.85 GHz Band. Bottom Channel. (Channel 10)
GPH\38658ETF03\044	Scan of Radiated Electric Field: Receive Mode: 4000 to 5000 MHz 5.725 to 5.825 GHz Band. Top Channel. (Channel 14)
GPH\38658ETF03\045	Scan of Radiated Electric Field: Receive Mode: 5000 to 6000 MHz 5.15 to 5.25 GHz Band. Bottom Channel. (Channel 0)
GPH\38658ETF03\046	Scan of Radiated Electric Field: Receive Mode: 5000 to 6000 MHz 5.15 to 5.25 GHz Band. Top Channel. (Channel 4)
GPH\38658ETF03\047	Scan of Radiated Electric Field: Receive Mode: 5000 to 6000 MHz 5.25 to 5.35 GHz Band. Bottom Channel. (Channel 5)
GPH\38658ETF03\048	Scan of Radiated Electric Field: Receive Mode: 5000 to 6000 MHz 5.25 to 5.35 GHz Band. Top Channel. (Channel 9)
GPH\38658ETF03\049	Scan of Radiated Electric Field: Receive Mode: 5000 to 6000 MHz 5.725 to 5.85 GHz Band. Bottom Channel. (Channel 10)
GPH\38658ETF03\050	Scan of Radiated Electric Field: Receive Mode: 5000 to 6000 MHz 5.725 to 5.825 GHz Band. Top Channel. (Channel 14)
GPH\38658ETF03\051	Scan of Radiated Electric Field: Receive Mode: 6000 to 8200 MHz 5.15 to 5.25 GHz Band. Bottom Channel. (Channel 0)
GPH\38658ETF03\052	Scan of Radiated Electric Field: Receive Mode: 6000 to 8200 MHz 5.15 to 5.25 GHz Band. Top Channel. (Channel 4)
GPH\38658ETF03\053	Scan of Radiated Electric Field: Receive Mode: 6000 to 8200 MHz 5.25 to 5.35 GHz Band. Bottom Channel. (Channel 5)
GPH\38658ETF03\054	Scan of Radiated Electric Field: Receive Mode: 6000 to 8200 MHz 5.25 to 5.35 GHz Band. Top Channel. (Channel 9)
GPH\38658ETF03\055	Scan of Radiated Electric Field: Receive Mode: 6000 to 8200 MHz 5.725 to 5.85 GHz Band. Bottom Channel. (Channel 10)
GPH\38658ETF03\056	Scan of Radiated Electric Field: Receive Mode: 6000 to 8200 MHz 5.725 to 5.825 GHz Band. Top Channel. (Channel 14)

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Graph Reference Number	Title
GPH\38658ETF03\057	Scan of Radiated Electric Field: Receive Mode: 8200 to 12500 MHz 5.15 to 5.25 GHz Band. Bottom Channel. (Channel 0)
GPH\38658ETF03\058	Scan of Radiated Electric Field: Receive Mode: 8200 to 12500 MHz 5.15 to 5.25 GHz Band. Top Channel. (Channel 4)
GPH\38658ETF03\059	Scan of Radiated Electric Field: Receive Mode: 8200 to 12500 MHz 5.25 to 5.35 GHz Band. Bottom Channel. (Channel 5)
GPH\38658ETF03\060	Scan of Radiated Electric Field: Receive Mode: 8200 to 12500 MHz 5.25 to 5.35 GHz Band. Top Channel. (Channel 9)
GPH\38658ETF03\061	Scan of Radiated Electric Field: Receive Mode: 8200 to 12500 MHz 5.725 to 5.85 GHz Band. Bottom Channel. (Channel 10)
GPH\38658ETF03\062	Scan of Radiated Electric Field: Receive Mode: 8200 to 12500 MHz 5.725 to 5.825 GHz Band. Top Channel. (Channel 14)
GPH\38658ETF03\063	Scan of Radiated Electric Field: Receive Mode: 12500 to 18000 MHz 5.15 to 5.25 GHz Band. Bottom Channel. (Channel 0)
GPH\38658ETF03\064	Scan of Radiated Electric Field: Receive Mode: 12500 to 18000 MHz 5.15 to 5.25 GHz Band. Top Channel. (Channel 4)
GPH\38658ETF03\065	Scan of Radiated Electric Field: Receive Mode: 12500 to 18000 MHz 5.25 to 5.35 GHz Band. Bottom Channel. (Channel 5)
GPH\38658ETF03\066	Scan of Radiated Electric Field: Receive Mode: 12500 to 18000 MHz 5.25 to 5.35 GHz Band. Top Channel. (Channel 9)
GPH\38658ETF03\067	Scan of Radiated Electric Field: Receive Mode: 12500 to 18000 MHz 5.725 to 5.85 GHz Band. Bottom Channel. (Channel 10)
GPH\38658ETF03\068	Scan of Radiated Electric Field: Receive Mode: 12500 to 18000 MHz 5.725 to 5.825 GHz Band. Top Channel. (Channel 14)
GPH\38658ETF03\069	Scan of Radiated Electric Field: Receive Mode: 18000 to 26000 MHz 5.15 to 5.25 GHz Band. Bottom Channel. (Channel 0)
GPH\38658ETF03\070	Scan of Radiated Electric Field: Receive Mode: 18000 to 26000 MHz 5.15 to 5.25 GHz Band. Top Channel. (Channel 4)
GPH\38658ETF03\071	Scan of Radiated Electric Field: Receive Mode: 18000 to 26000 MHz 5.25 to 5.35 GHz Band. Bottom Channel. (Channel 5)
GPH\38658ETF03\072	Scan of Radiated Electric Field: Receive Mode: 18000 to 26000 MHz 5.25 to 5.35 GHz Band. Top Channel. (Channel 9)
GPH\38658ETF03\073	Scan of Radiated Electric Field: Receive Mode: 18000 to 26000 MHz 5.725 to 5.85 GHz Band. Bottom Channel. (Channel 10)
GPH\38658ETF03\074	Scan of Radiated Electric Field: Receive Mode: 18000 to 26000 MHz 5.725 to 5.825 GHz Band. Top Channel. (Channel 14)
GPH\38658ETF03\075	Transmitter Power Level: EIRP. Tx Horizontal. 5.15 to 5.25 GHz Band. Bottom Channel. (Channel 0)

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GPH\38658ETF03\076	Transmitter Power Level: EIRP. Tx Vertical. 5.15 to 5.25 GHz Band. Bottom Channel. (Channel 0)
GPH\38658ETF03\077	Transmitter Power Level: EIRP. Tx Vertical. 5.15 to 5.25 GHz Band. Top Channel. (Channel 4)
GPH\38658ETF03\078	Transmitter Power Level: EIRP. Tx Horizontal. 5.15 to 5.25 GHz Band. Top Channel. (Channel 4)
GPH\38658ETF03\079	Transmitter Power Level: EIRP. Tx Horizontal. 5.25 to 5.35 GHz Band. Bottom Channel. (Channel 5)
GPH\38658ETF03\080	Transmitter Power Level: EIRP. Tx Vertical. 5.25 to 5.35 GHz Band. Bottom Channel. (Channel 5)
GPH\38658ETF03\081	Transmitter Power Level: EIRP. Tx Vertical. 5.25 to 5.35 GHz Band. Top Channel. (Channel 9)
GPH\38658ETF03\082	Transmitter Power Level: EIRP. Tx Horizontal. 5.25 to 5.35 GHz Band. Top Channel. (Channel 9)
GPH\38658ETF03\083	Transmitter Power Level: EIRP. Tx Horizontal. 5.725 to 5.825 GHz Band. Bottom Channel. (Channel 10)
GPH\38658ETF03\084	Transmitter Power Level: EIRP. Tx Vertical. 5.725 to 5.825 GHz Band. Bottom Channel. (Channel 10)
GPH\38658ETF03\085	Transmitter Power Level: EIRP. Tx Vertical. 5.725 to 5.825 GHz Band. Top Channel. (Channel 14)
GPH\38658ETF03\086	Transmitter Power Level. Tx Horizontal. 5.725 to 5.825 GHz Band. Top Channel. (Channel 14)
GPH\38658ETF03\087	Spurious Radiated Emissions: EIRP. Tx Horizontal. 5.15 to 5.25 GHz Band. Bottom Channel. (Channel 0). Tx Lower Band Edge. 5.0 to 5.25 GHz.
GPH\38658ETF03\088	Spurious Radiated Emissions: EIRP. Tx Vertical. 5.15 to 5.25 GHz Band. Bottom Channel. (Channel 0). Tx Lower Band Edge. 5.0 to 5.25 GHz.
GPH\38658ETF03\089	Spurious Radiated Emissions: EIRP. Tx Both Polarities. 5.15 to 5.25 GHz Band. Bottom Channel. (Channel 0). Tx Upper Band Edge. 5.25 to 6.0 GHz.
GPH\38658ETF03\090	Spurious Radiated Emissions: EIRP. Tx Both Polarities. 5.15 to 5.25 GHz Band. Bottom Channel. (Channel 0). 4.0 to 5.0 GHz.
GPH\38658ETF03\091	Spurious Radiated Emissions: EIRP. Tx Vertical. 5.15 to 5.25 GHz Band. Top Channel. (Channel 4). Tx Upper Band Edge. 5.1838 to 5.3088 GHz.
GPH\38658ETF03\092	Spurious Radiated Emissions: EIRP. Tx Horizontal. 5.15 to 5.25 GHz Band. Top Channel. (Channel 4). Tx Upper Band Edge. 5.1838 to 5.3088 GHz.

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Graph Reference Number	Title
GPH\38658ETF03\093	Spurious Radiated Emissions: EIRP. Tx Both Polarities. 5.15 to 5.25 GHz Band. Top Channel. (Channel 4). Tx Lower Band Edge. 5.0 to 5.2 GHz.
GPH\38658ETF03\094	Spurious Radiated Emissions: EIRP. Tx Both Polarities. 5.15 to 5.25 GHz Band. Top Channel. (Channel 4). 5.3 to 6.0 GHz.
GPH\38658ETF03\095	Spurious Radiated Emissions: EIRP. Tx Both Polarities. 5.15 to 5.25 GHz Band. Top Channel. (Channel 4). 4.0 to 5.0 GHz.
GPH\38658ETF03\096	Spurious Radiated Emissions: EIRP. Tx Vertical. 5.25 to 5.35 GHz Band. Bottom Channel. (Channel 5). Tx Lower Band Edge. 5.1783 to 5.3033 GHz.
GPH\38658ETF03\097	Spurious Radiated Emissions: EIRP. Tx Horizontal. 5.25 to 5.35 GHz Band. Bottom Channel. (Channel 5). Tx Lower Band Edge. 5.1783 to 5.3033 GHz.
GPH\38658ETF03\098	Spurious Radiated Emissions: EIRP. Tx Both Polarities. 5.25 to 5.35 GHz Band. Bottom Channel. (Channel 5). 5.0 to 5.2 GHz.
GPH\38658ETF03\099	Spurious Radiated Emissions: EIRP. Tx Both Polarities. 5.25 to 5.35 GHz Band. Bottom Channel. (Channel 5). Upper Band Edge. 5.3 to 6.0 GHz.
GPH\38658ETF03\100	Spurious Radiated Emissions: EIRP. Tx Both Polarities. 5.25 to 5.35 GHz Band. Bottom Channel. (Channel 5). 4.0 to 5.0 GHz.
GPH\38658ETF03\101	Spurious Radiated Emissions: EIRP. Tx Vertical. 5.25 to 5.35 GHz Band. Top Channel. (Channel 9). Upper Band Edge. 5.31124 to 5.37374 GHz.
GPH\38658ETF03\102	Spurious Radiated Emissions: EIRP. Tx Horizontal. 5.25 to 5.35 GHz Band. Top Channel. (Channel 9). Upper Band Edge. 5.31124 to 5.37374 GHz.
GPH\38658ETF03\103	Spurious Radiated Emissions: EIRP. Tx Both Polarities. 5.25 to 5.35 GHz Band. Top Channel. (Channel 9). 5.36 to 6.0 GHz.
GPH\38658ETF03\104	Spurious Radiated Emissions: EIRP. Tx Both Polarities. 5.25 to 5.35 GHz Band. Top Channel. (Channel 9). Lower Band Edge. 5.0 to 5.32 GHz.
GPH\38658ETF03\105	Spurious Radiated Emissions: EIRP. Tx Both Polarities. 5.25 to 5.35 GHz Band. Top Channel. (Channel 9). 4.0 to 5.0 GHz.

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Graph Reference Number	Title
GPH\38658ETF03\106	Spurious Radiated Emissions: EIRP. Tx Vertical. 5.725 to 5.825 GHz Band. Bottom Channel. (Channel 10). Bottom Band Edge. 5.70486 to 5.76736 GHz.
GPH\38658ETF03\107	Spurious Radiated Emissions: EIRP. Tx Horizontal. 5.725 to 5.825 GHz Band. Bottom Channel. (Channel 10). Bottom Band Edge. 5.70486 to 5.76736 GHz.
GPH\38658ETF03\108	Spurious Radiated Emissions: EIRP. Tx Both Polarities. 5.725 to 5.825 GHz Band. Bottom Channel. (Channel 10). 5.0 to 5.715 GHz.
GPH\38658ETF03\109	Spurious Radiated Emissions: EIRP. Tx Both Polarities. 5.725 to 5.825 GHz Band. Bottom Channel. (Channel 10). Upper Band Edge. 5.76 to 6.0 GHz.
GPH\38658ETF03\110	Spurious Radiated Emissions: EIRP. Tx Both Polarities. 5.725 to 5.825 GHz Band. Bottom Channel. (Channel 10). 4.0 to 5.0 GHz.
GPH\38658ETF03\111	Spurious Radiated Emissions: EIRP. Tx Horizontal. 5.725 to 5.825 GHz Band. Top Channel. (Channel 14). Upper Band Edge. 5.77909 to 5.84159 GHz.
GPH\38658ETF03\112	Spurious Radiated Emissions: EIRP. Tx Vertical. 5.725 to 5.825 GHz Band. Top Channel. (Channel 14). Upper Band Edge. 5.77909 to 5.84159 GHz.
GPH\38658ETF03\113	Spurious Radiated Emissions: EIRP. Tx Both Polarities. 5.725 to 5.825 GHz Band. Top Channel. (Channel 14). 5.835 to 6.0 GHz.
GPH\38658ETF03\114	Spurious Radiated Emissions: EIRP. Tx Both Polarities. 5.725 to 5.825 GHz Band. Top Channel. (Channel 14). Lower Band Edge. 5.0 to 5.78 GHz.
GPH\38658ETF03\115	Spurious Radiated Emissions: EIRP. Tx Both Polarities. 5.725 to 5.825 GHz Band. Top Channel. (Channel 14). 4.0 to 5.0 GHz.
GPH\38658ETF03\116	Spurious Radiated Emissions: EIRP. Tx Both Polarities. 5.15 to 5.25 GHz Band. Bottom Channel. (Channel 0). 6.0 to 8.2 GHz.
GPH\38658ETF03\117	Spurious Radiated Emissions: EIRP. Tx Both Polarities. 5.15 to 5.25 GHz Band. Top Channel. (Channel 4). 6.0 to 8.2 GHz.
GPH\38658ETF03\118	Spurious Radiated Emissions: EIRP. Tx Both Polarities. 5.25 to 5.35 GHz Band. Bottom Channel. (Channel 5). 6.0 to 8.2 GHz.

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Graph Reference Number	Title
GPH\38658ETF03\119	Spurious Radiated Emissions: EIRP. Tx Both Polarities. 5.25 to 5.35 GHz Band. Top Channel. (Channel 9). 6.0 to 8.2 GHz.
GPH\38658ETF03\120	Spurious Radiated Emissions: EIRP. Tx Both Polarities. 5.725 to 5.825 GHz Band. Bottom Channel. (Channel 10). 6.0 to 8.2 GHz.
GPH\38658ETF03\121	Spurious Radiated Emissions: EIRP. Tx Both Polarities. 5.725 to 5.825 GHz Band. Top Channel. (Channel 14). 6.0 to 8.2 GHz.
GPH\38658ETF03\122	Spurious Radiated Emissions: EIRP. Tx Both Polarities. 5.15 to 5.25 GHz Band. Bottom Channel. (Channel 0). 8.2 to 12.5 GHz.
GPH\38658ETF03\123	Spurious Radiated Emissions: EIRP. Tx Both Polarities. 5.15 to 5.25 GHz Band. Top Channel. (Channel 4). 8.2 to 12.5 GHz.
GPH\38658ETF03\124	Spurious Radiated Emissions: EIRP. Tx Both Polarities. 5.25 to 5.35 GHz Band. Bottom Channel. (Channel 5). 8.2 to 12.5 GHz.
GPH\38658ETF03\125	Spurious Radiated Emissions: EIRP. Tx Both Polarities. 5.25 to 5.35 GHz Band. Top Channel. (Channel 9). 8.2 to 12.5 GHz.
GPH\38658ETF03\126	Spurious Radiated Emissions: EIRP. Tx Both Polarities. 5.725 to 5.825 GHz Band. Bottom Channel. (Channel 10). 8.2 to 12.5 GHz.
GPH\38658ETF03\127	Spurious Radiated Emissions: EIRP. Tx Both Polarities. 5.725 to 5.825 GHz Band. Top Channel. (Channel 14). 8.2 to 12.5 GHz.
GPH\38658ETF03\128	Spurious Radiated Emissions: EIRP. Tx Both Polarities. 5.15 to 5.25 GHz Band. Bottom Channel. (Channel 0). 12.5 to 18.0 GHz.
GPH\38658ETF03\129	Spurious Radiated Emissions: EIRP. Tx Both Polarities. 5.15 to 5.25 GHz Band. Top Channel. (Channel 4). 12.5 to 18.0 GHz.
GPH\38658ETF03\130	Spurious Radiated Emissions: EIRP. Tx Both Polarities. 5.25 to 5.35 GHz Band. Bottom Channel. (Channel 5). 12.5 to 18.0 GHz.
GPH\38658ETF03\131	Spurious Radiated Emissions: EIRP. Tx Both Polarities. 5.25 to 5.35 GHz Band. Top Channel. (Channel 9). 12.5 to 18.0 GHz.

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Graph Reference Number	Title
GPH\38658ETF03\132	Spurious Radiated Emissions: EIRP. Tx Both Polarities. 5.725 to 5.825 GHz Band. Bottom Channel. (Channel 10). 12.5 to 18.0 GHz.
GPH\38658ETF03\133	Spurious Radiated Emissions: EIRP. Tx Both Polarities. 5.725 to 5.825 GHz Band. Top Channel. (Channel 14). 12.5 to 18.0 GHz.
GPH\38658ETF03\134	Spurious Radiated Emissions: EIRP. Tx Both Polarities. 5.15 to 5.25 GHz Band. Bottom Channel. (Channel 0). 18.0 to 26.0 GHz.
GPH\38658ETF03\135	Spurious Radiated Emissions: EIRP. Tx Both Polarities. 5.15 to 5.25 GHz Band. Top Channel. (Channel 4). 18.0 to 26.0 GHz.
GPH\38658ETF03\136	Spurious Radiated Emissions: EIRP. Tx Both Polarities. 5.25 to 5.35 GHz Band. Bottom Channel. (Channel 5). 18.0 to 26.0 GHz.
GPH\38658ETF03\137	Spurious Radiated Emissions: EIRP. Tx Both Polarities. 5.25 to 5.35 GHz Band. Top Channel. (Channel 9). 18.0 to 26.0 GHz.
GPH\38658ETF03\138	Spurious Radiated Emissions: EIRP. Tx Both Polarities. 5.725 to 5.825 GHz Band. Bottom Channel. (Channel 10). 18.0 to 26.0 GHz.
GPH\38658ETF03\139	Spurious Radiated Emissions: EIRP. Tx Both Polarities. 5.725 to 5.825 GHz Band. Top Channel. (Channel 14). 18.0 to 26.0 GHz.
GPH\38658ETF03\140	Spurious Radiated Emissions: EIRP. Tx Both Polarities. 5.15 to 5.25 GHz Band. Bottom Channel. (Channel 0). 26.0 to 40.0 GHz.
GPH\38658ETF03\141	Spurious Radiated Emissions: EIRP. Tx Both Polarities. 5.15 to 5.25 GHz Band. Top Channel. (Channel 4). 26.0 to 40.0 GHz.
GPH\38658ETF03\142	Spurious Radiated Emissions: EIRP. Tx Both Polarities. 5.25 to 5.35 GHz Band. Bottom Channel. (Channel 5). 26.0 to 40.0 GHz.
GPH\38658ETF03\143	Spurious Radiated Emissions: EIRP. Tx Both Polarities. 5.25 to 5.35 GHz Band. Top Channel. (Channel 9). 26.0 to 40.0 GHz.
GPH\38658ETF03\144	Spurious Radiated Emissions: EIRP. Tx Both Polarities. 5.725 to 5.825 GHz Band. Bottom Channel. (Channel 10). 26.0 to 40.0 GHz.

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Graph Reference Number	Title
GPH\38658ETF03\145	Spurious Radiated Emissions: EIRP. Tx Both Polarities. 5.725 to 5.825 GHz Band. Top Channel. (Channel 14). 26.0 to 40.0 GHz.
GPH\38658ETF03\146	Spurious Radiated Emissions: EIRP. Tx Both Polarities. 5.15 to 5.25 GHz Band. Bottom Channel. (Channel 0). 2.0 to 4.0 GHz.
GPH\38658ETF03\147	Spurious Radiated Emissions: EIRP. Tx Both Polarities. 5.15 to 5.25 GHz Band. Top Channel. (Channel 4). 2.0 to 4.0 GHz.
GPH\38658ETF03\148	Spurious Radiated Emissions: EIRP. Tx Both Polarities. 5.25 to 5.35 GHz Band. Bottom Channel. (Channel 5). 2.0 to 4.0 GHz.
GPH\38658ETF03\149	Spurious Radiated Emissions: EIRP. Tx Both Polarities. 5.25 to 5.35 GHz Band. Top Channel. (Channel 9). 2.0 to 4.0 GHz.
GPH\38658ETF03\150	Spurious Radiated Emissions: EIRP. Tx Both Polarities. 5.725 to 5.825 GHz Band. Bottom Channel. (Channel 10). 2.0 to 4.0 GHz.
GPH\38658ETF03\151	Spurious Radiated Emissions: EIRP. Tx Both Polarities. 5.725 to 5.825 GHz Band. Top Channel. (Channel 14). 2.0 to 4.0 GHz.
GPH\38658ETF03\152	No Plot
GPH\38658ETF03\153	Spurious Radiated Emissions: EIRP. Tx Both Polarities. 5.15 to 5.25 GHz Band. Bottom Channel. (Channel 0). 1.0 to 2.0 GHz.
GPH\38658ETF03\154	Spurious Radiated Emissions: EIRP. Tx Both Polarities. 5.15 to 5.25 GHz Band. Top Channel. (Channel 4). 1.0 to 2.0 GHz.
GPH\38658ETF03\155	Spurious Radiated Emissions: EIRP. Tx Both Polarities. 5.25 to 5.35 GHz Band. Bottom Channel. (Channel 5). 1.0 to 2.0 GHz.
GPH\38658ETF03\156	Spurious Radiated Emissions: EIRP. Tx Both Polarities. 5.25 to 5.35 GHz Band. Top Channel. (Channel 9). 1.0 to 2.0 GHz.
GPH\38658ETF03\157	Spurious Radiated Emissions: EIRP. Tx Both Polarities. 5.725 to 5.825 GHz Band. Bottom Channel. (Channel 10). 1.0 to 2.0 GHz.
GPH\38658ETF03\158	Spurious Radiated Emissions: EIRP. Tx Both Polarities. 5.725 to 5.825 GHz Band. Top Channel. (Channel 14). 1.0 to 2.0 GHz.

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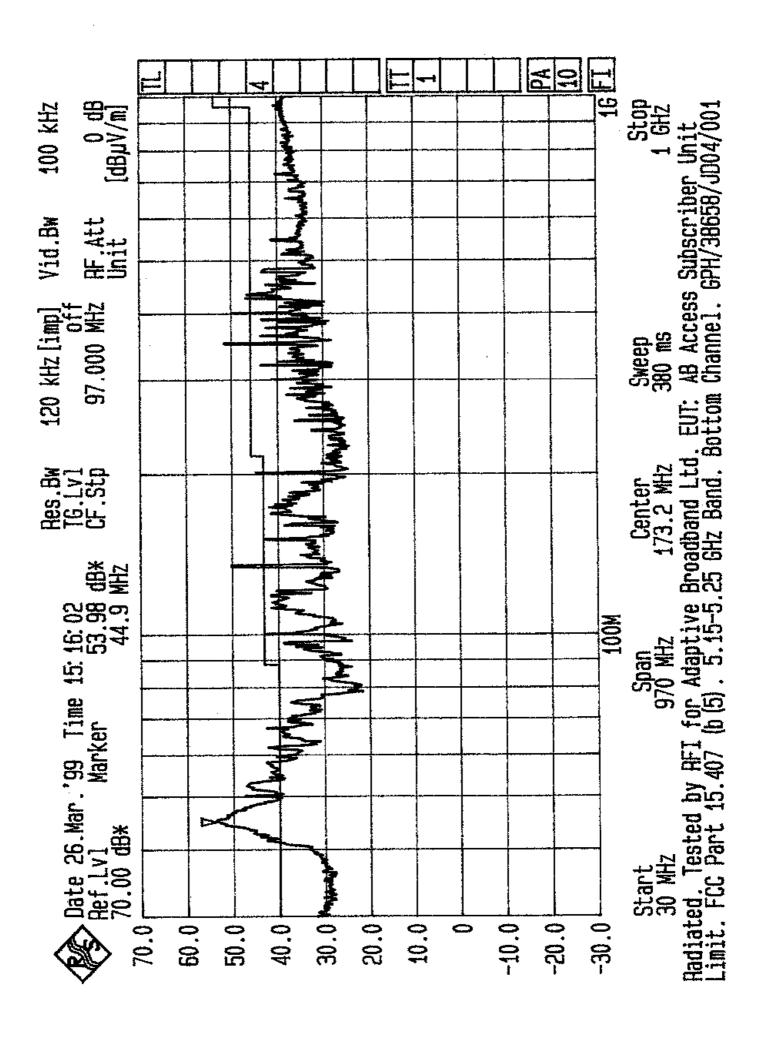
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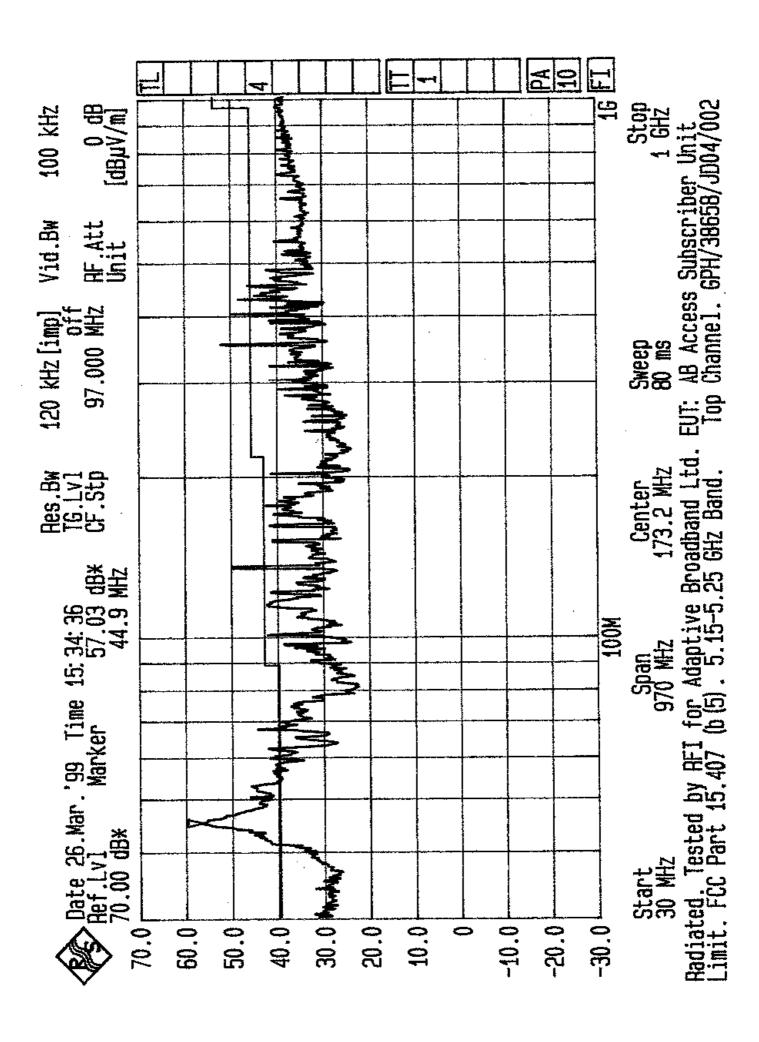
To: F.C.C. Part 15 Subpart E: 1998

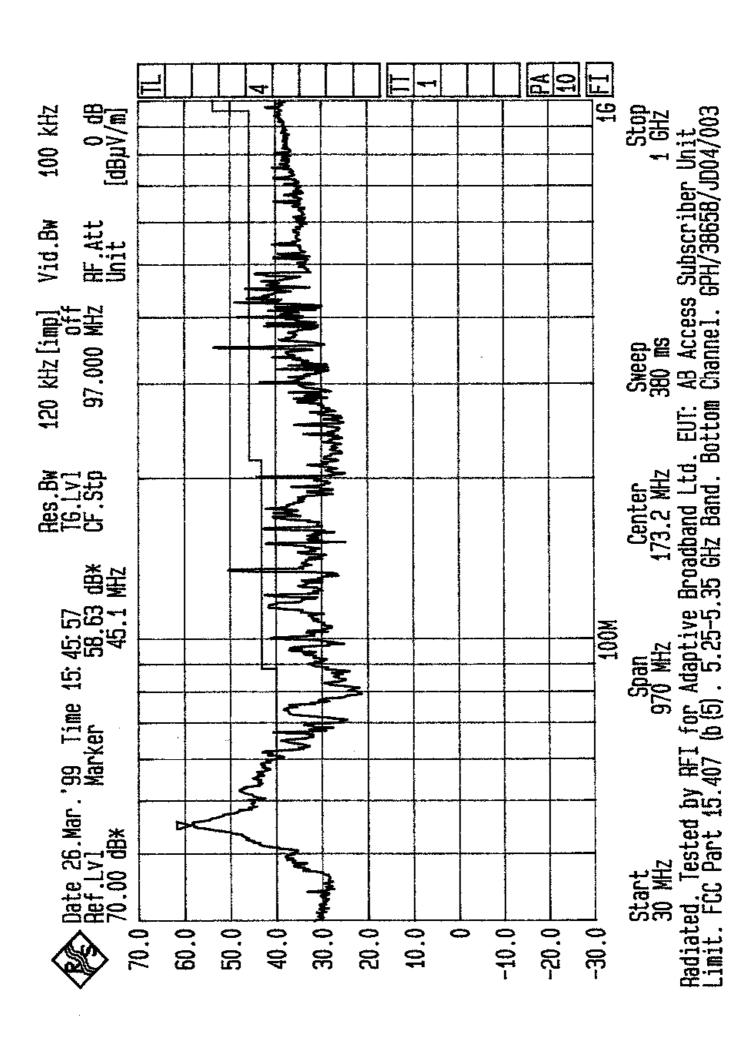
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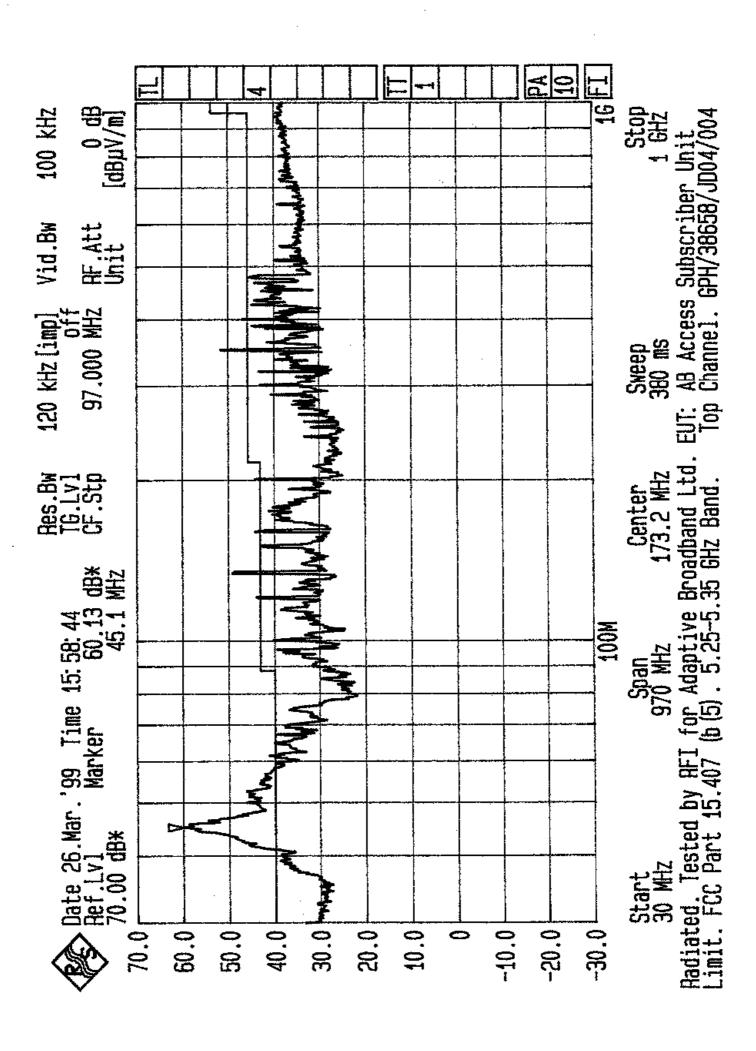
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GPH\38658ETF03\159	Scan of Conducted Emissions: Receive Mode: 450 kHz to 30 MHz 5.25 to 5.35 GHz Band. Bottom Channel. (Channel 5). Neutral Line.
GPH\38658ETF03\160	Scan of Conducted Emissions: Receive Mode: 450 kHz to 30 MHz 5.25 to 5.35 GHz Band. Top Channel. (Channel 9). Neutral Line.
GPH\38658ETF03\161	Scan of Conducted Emissions: Receive Mode: 450 kHz to 30 MHz 5.725 to 5.825 GHz Band. Bottom Channel. (Channel 10). Neutral Line.
GPH\38658ETF03\162	Scan of Conducted Emissions: Receive Mode: 450 kHz to 30 MHz 5.725 to 5.825 GHz Band. Top Channel. (Channel 14). Neutral Line.
GPH\38658ETF03\163	Scan of Conducted Emissions: Transmit Mode: 450 kHz to 30 MHz 5.15 to 5.25 GHz Band. Bottom Channel. (Channel 0). Neutral Line.
GPH\38658ETF03\164	Scan of Conducted Emissions: Transmit Mode: 450 kHz to 30 MHz 5.15 to 5.25 GHz Band. Top Channel. (Channel 4). Neutral Line.
GPH\38658ETF03\165	Scan of Conducted Emissions: Transmit Mode: 450 kHz to 30 MHz 5.25 to 5.35 GHz Band. Bottom Channel. (Channel 5). Neutral Line.
GPH\38658ETF03\166	Scan of Conducted Emissions: Transmit Mode: 450 kHz to 30 MHz 5.25 to 5.35 GHz Band. Top Channel. (Channel 9). Neutral Line.
GPH\38658ETF03\167	Scan of Conducted Emissions: Transmit Mode: 450 kHz to 30 MHz 5.725 to 5.85 GHz Band. Top Channel. (Channel 14). Neutral Line.
GPH\38658ETF03\168	Scan of Conducted Emissions: Transmit Mode: 450 kHz to 30 MHz 5.725 to 5.825 GHz Band. Bottom Channel. (Channel 10). Neutral Line.
GPH\38658ETF03\169	Frequency Stability. Supply Variation.
GPH\38658ETF03\170	Frequency Stability. Temperature Variation.

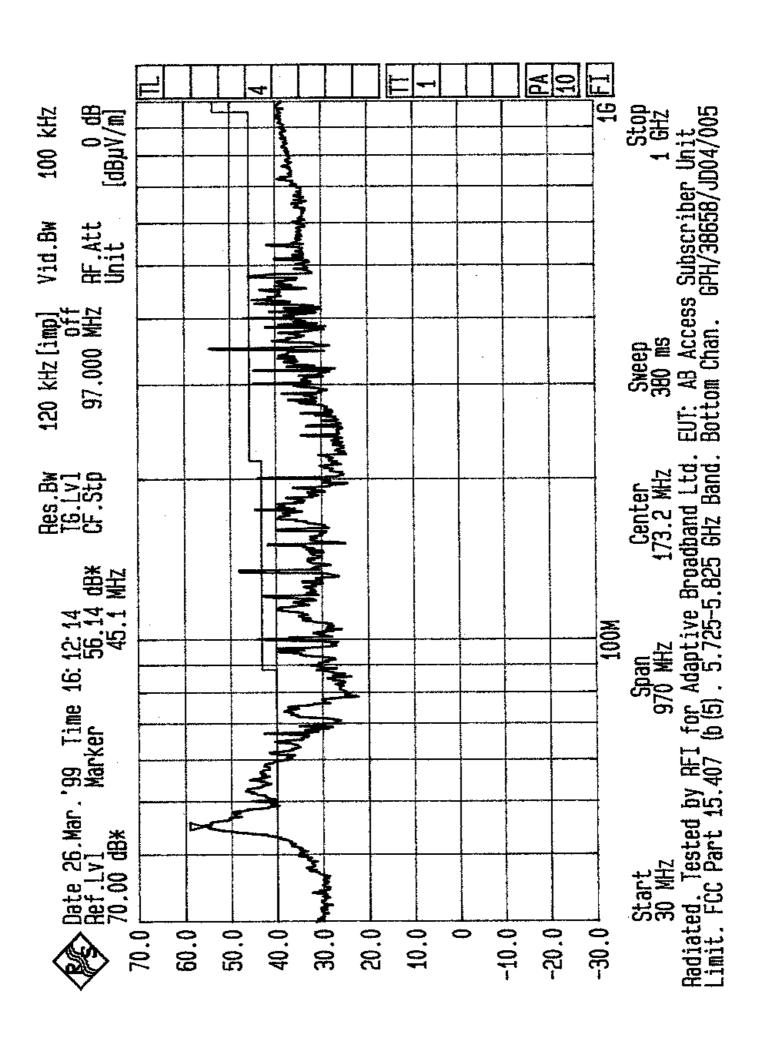
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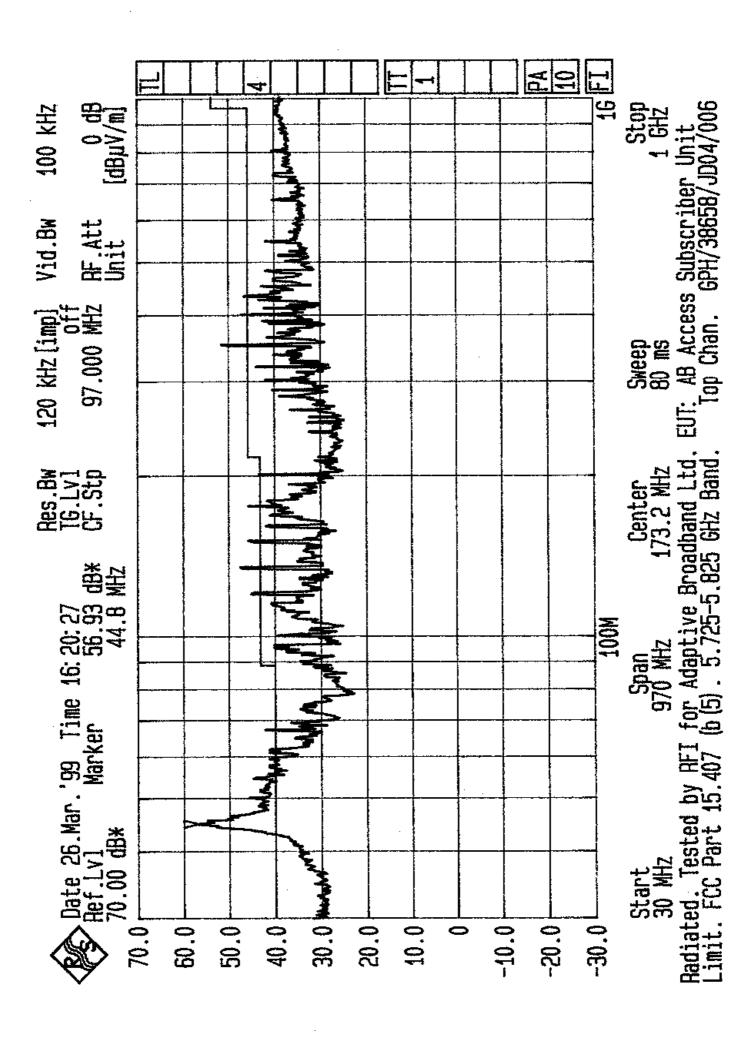


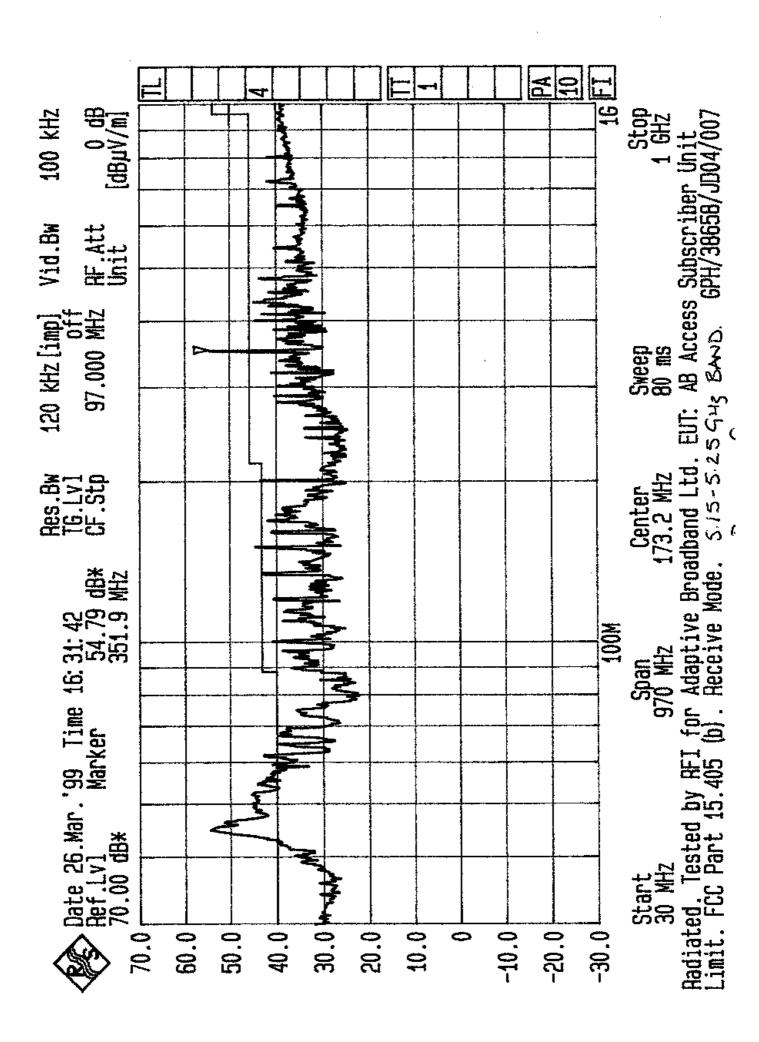


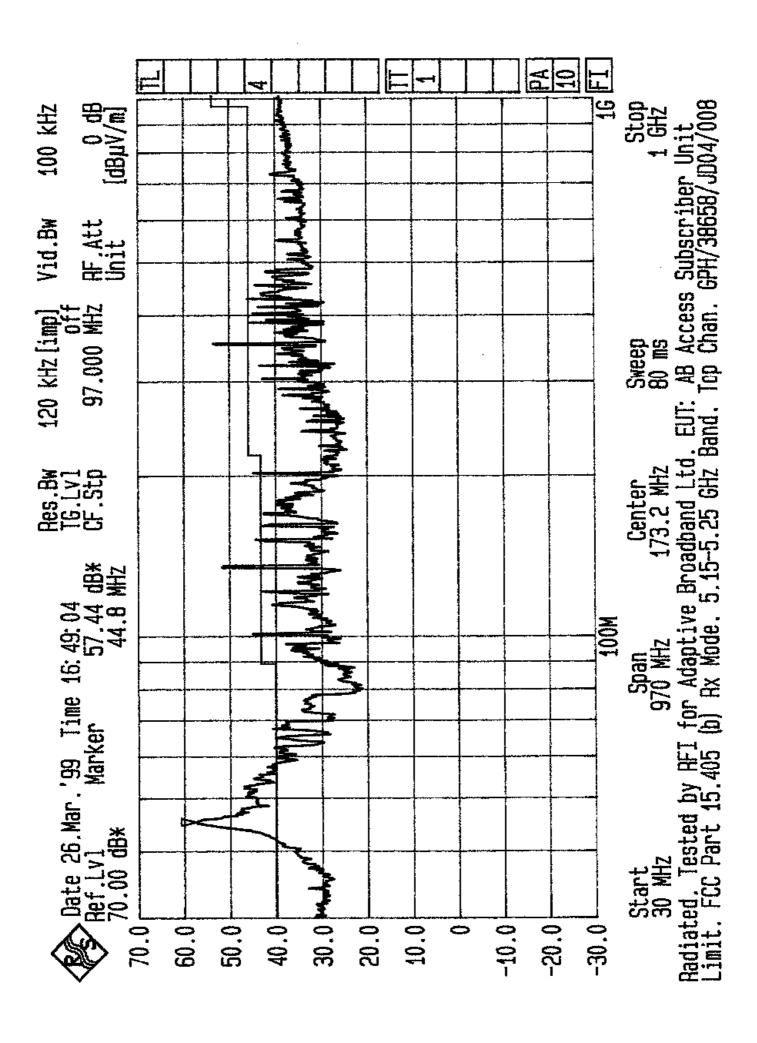


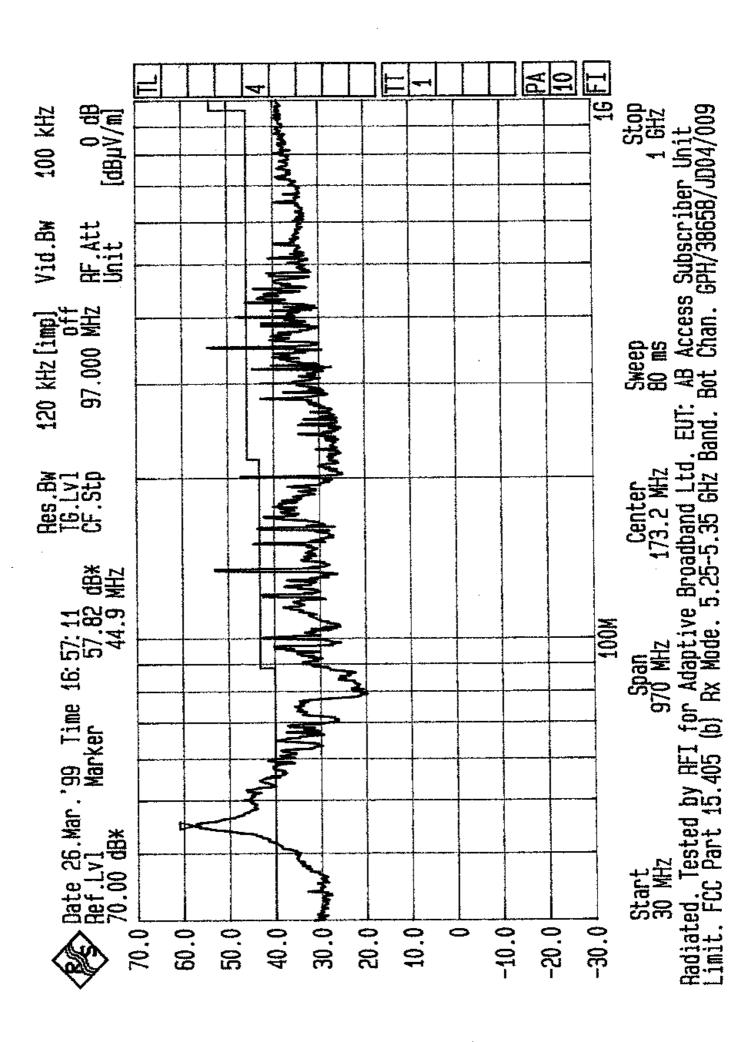


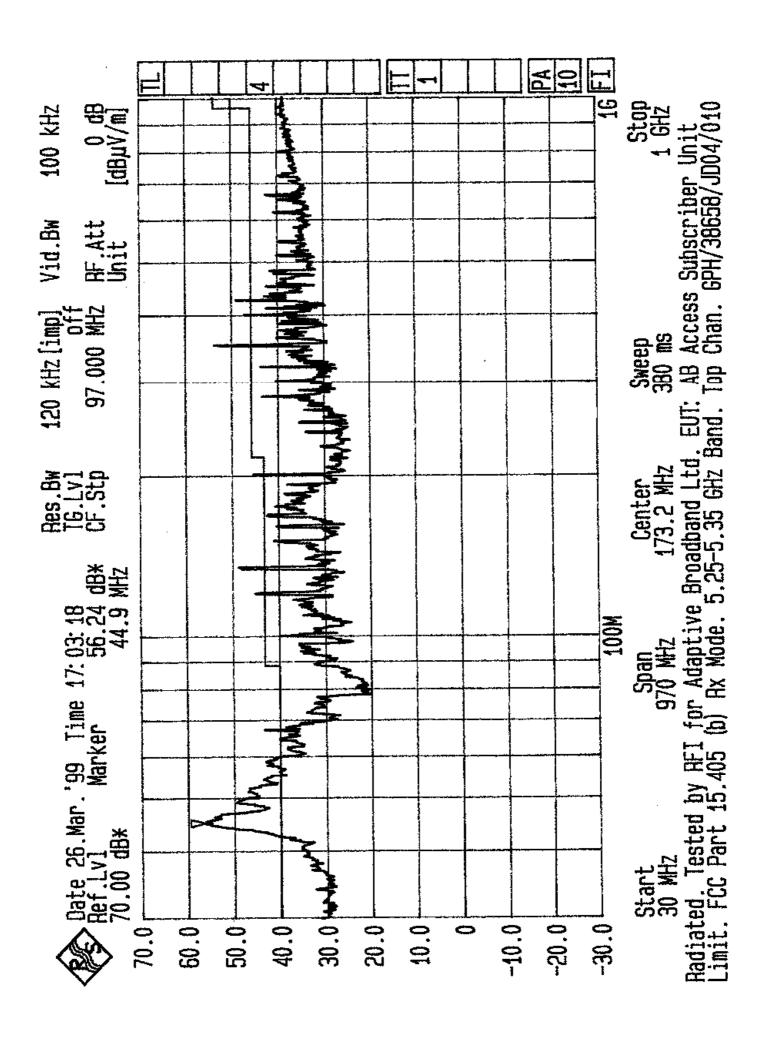


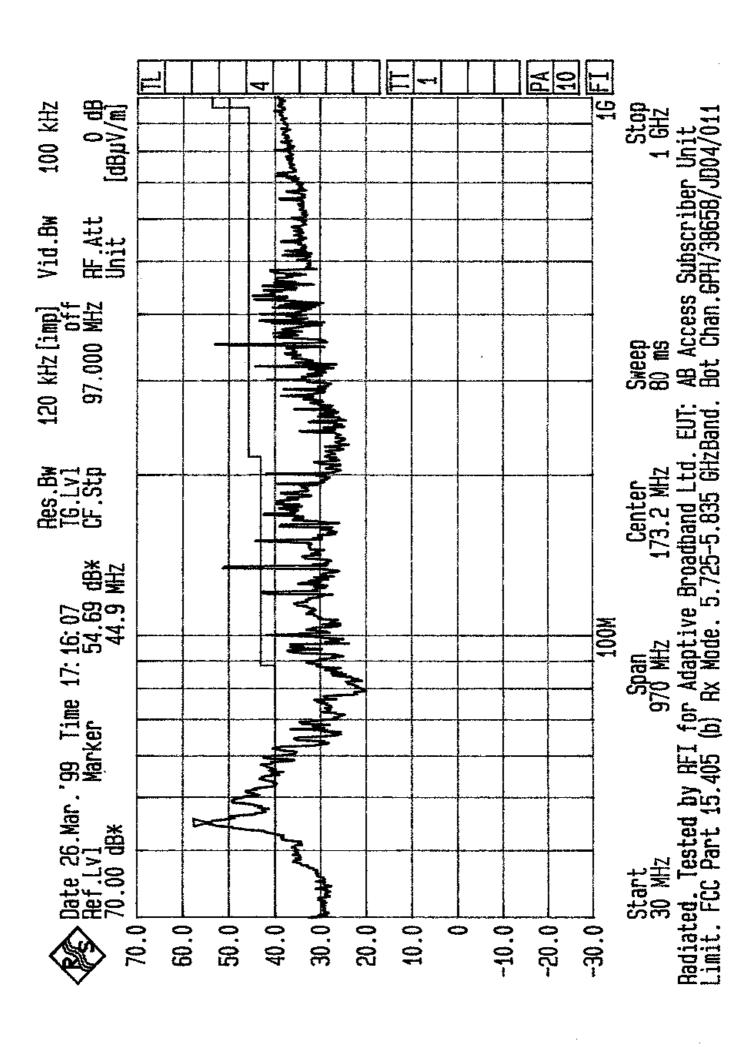


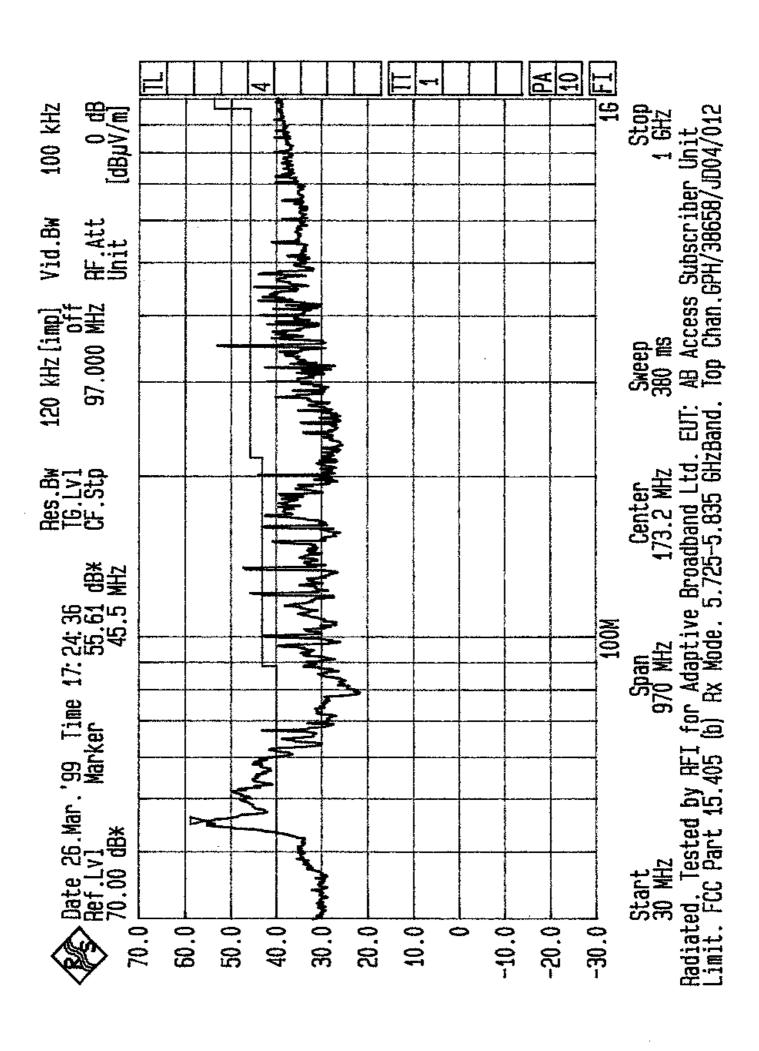


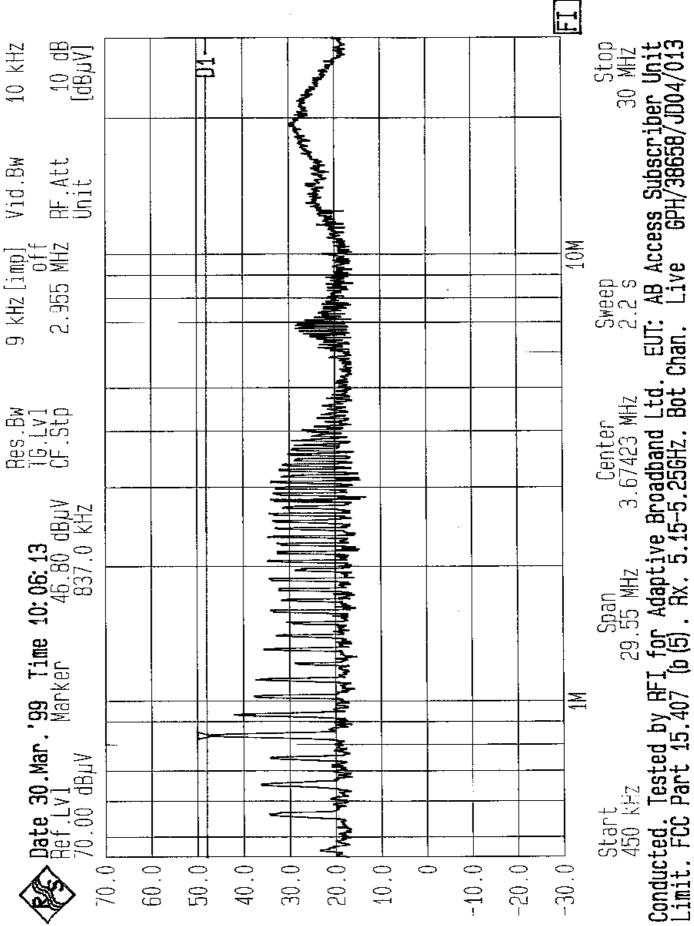




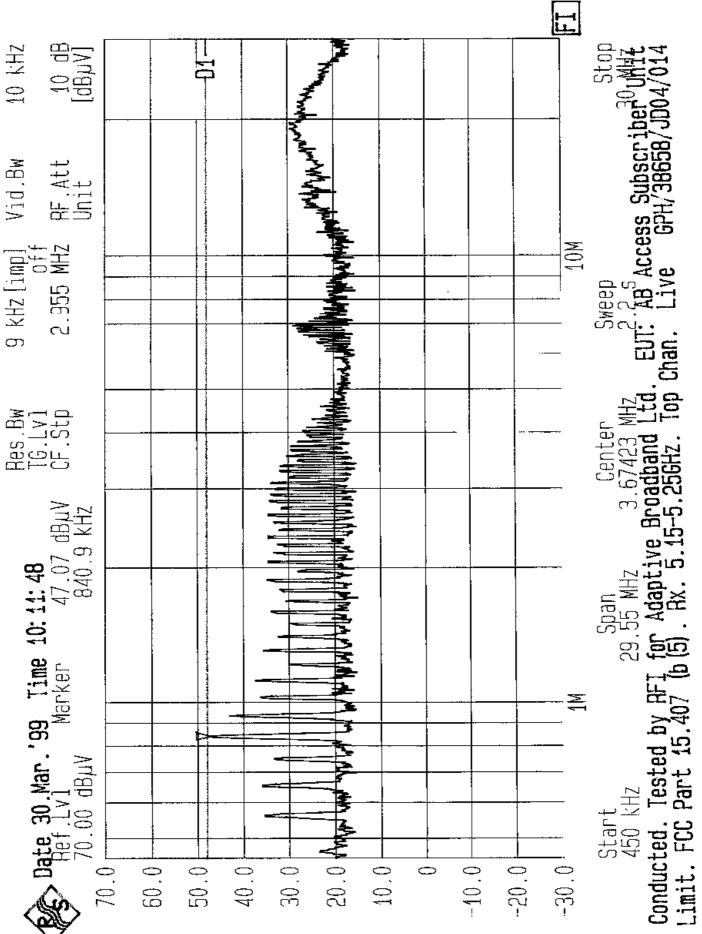


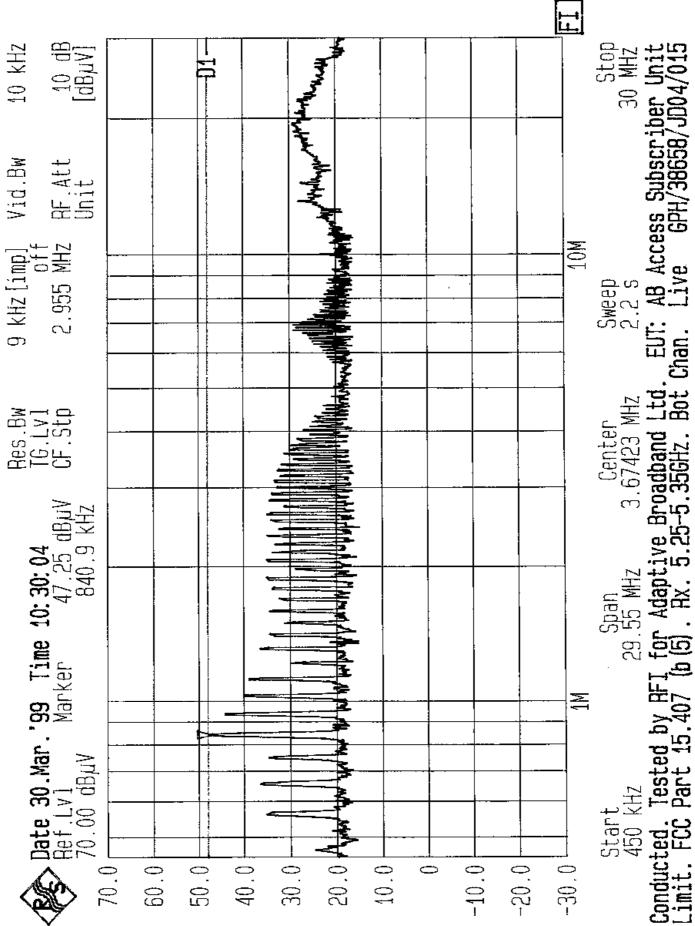




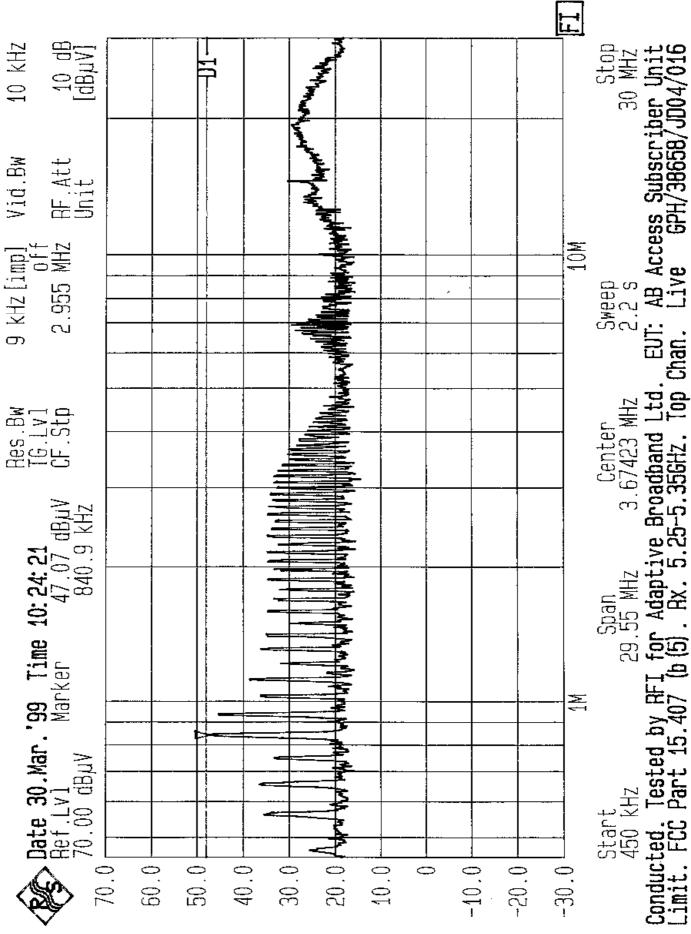


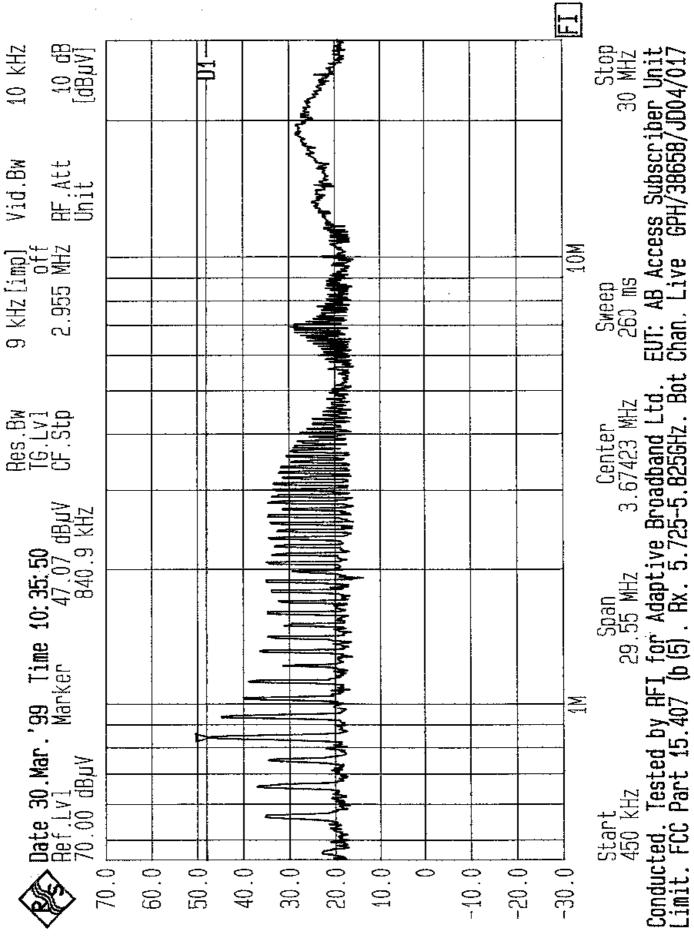
Ltd. EUT: AB Access Subscriber L Bot Chan. Live GPH/38658/JD04/

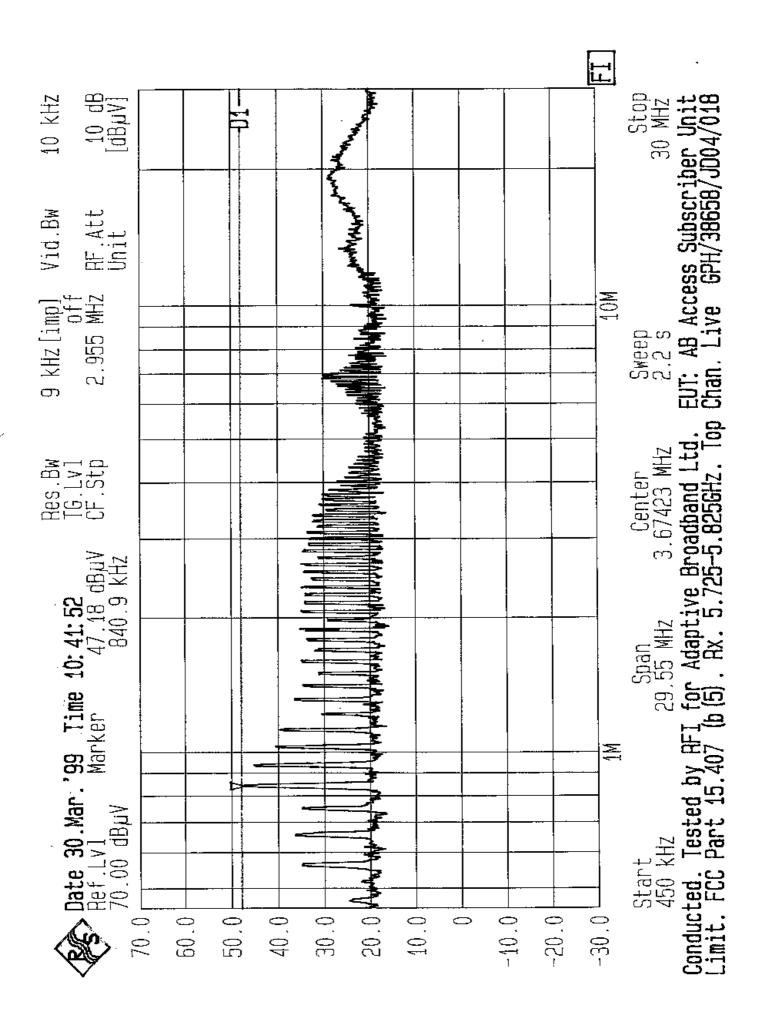


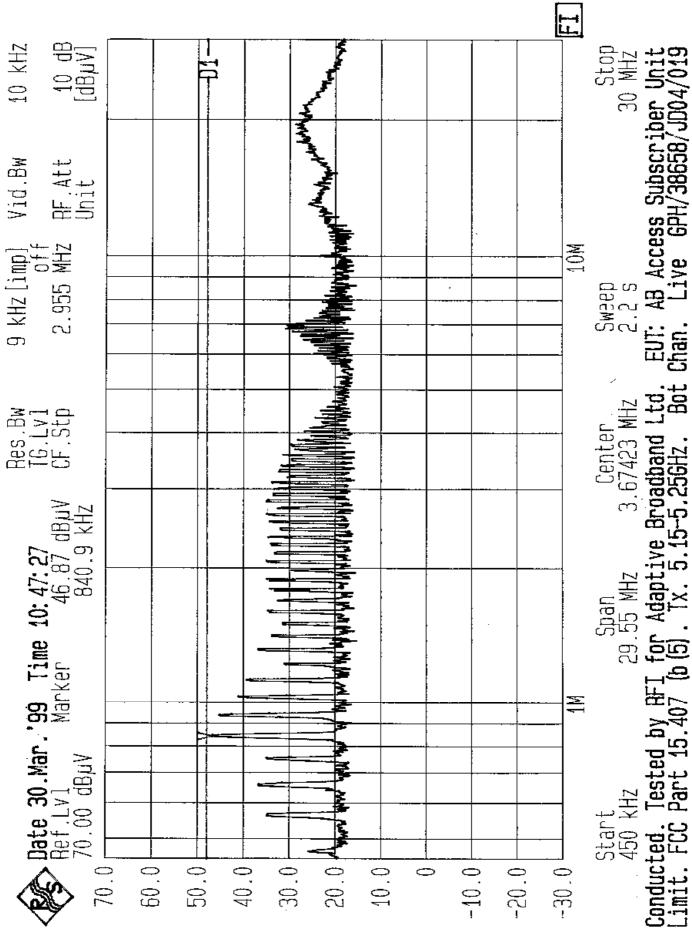


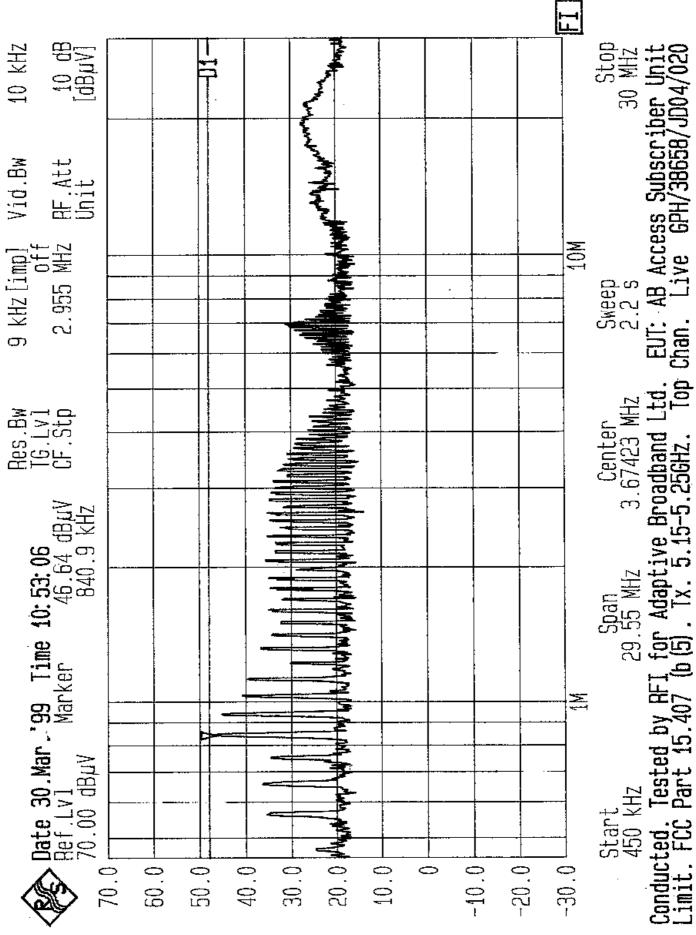
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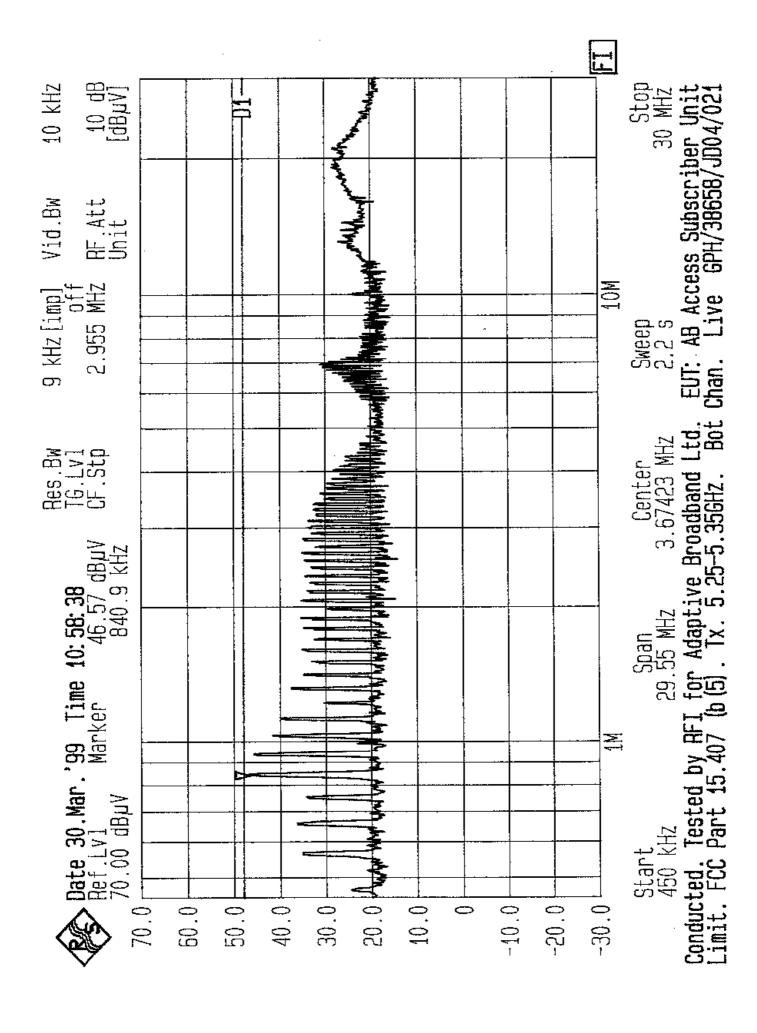


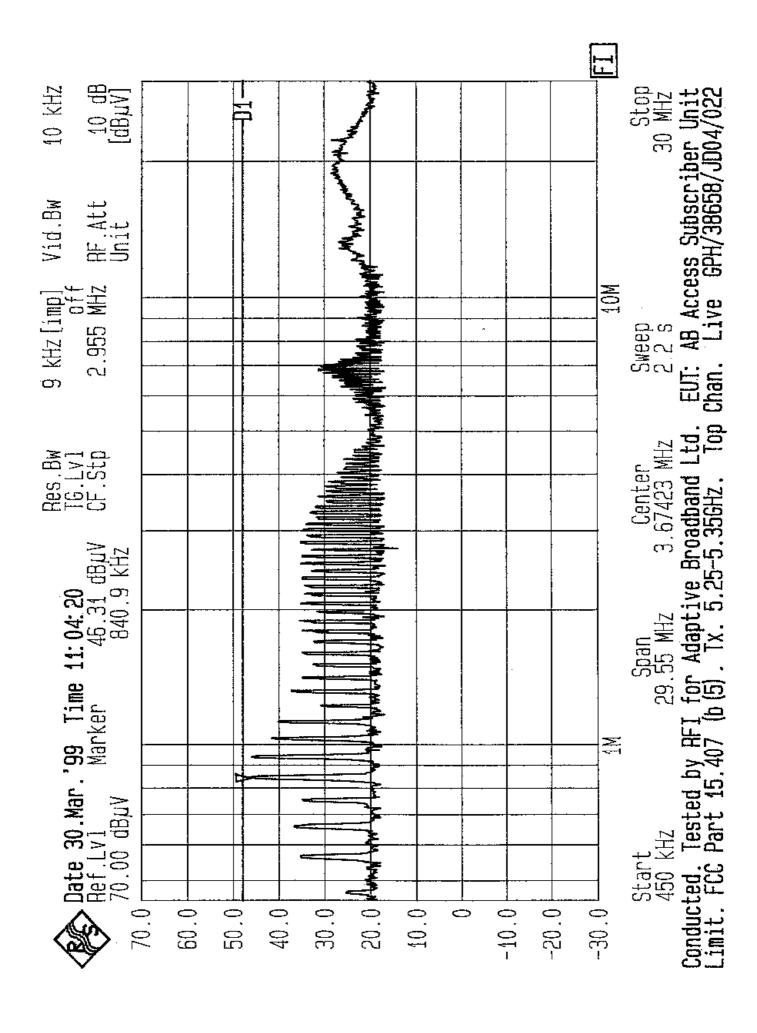


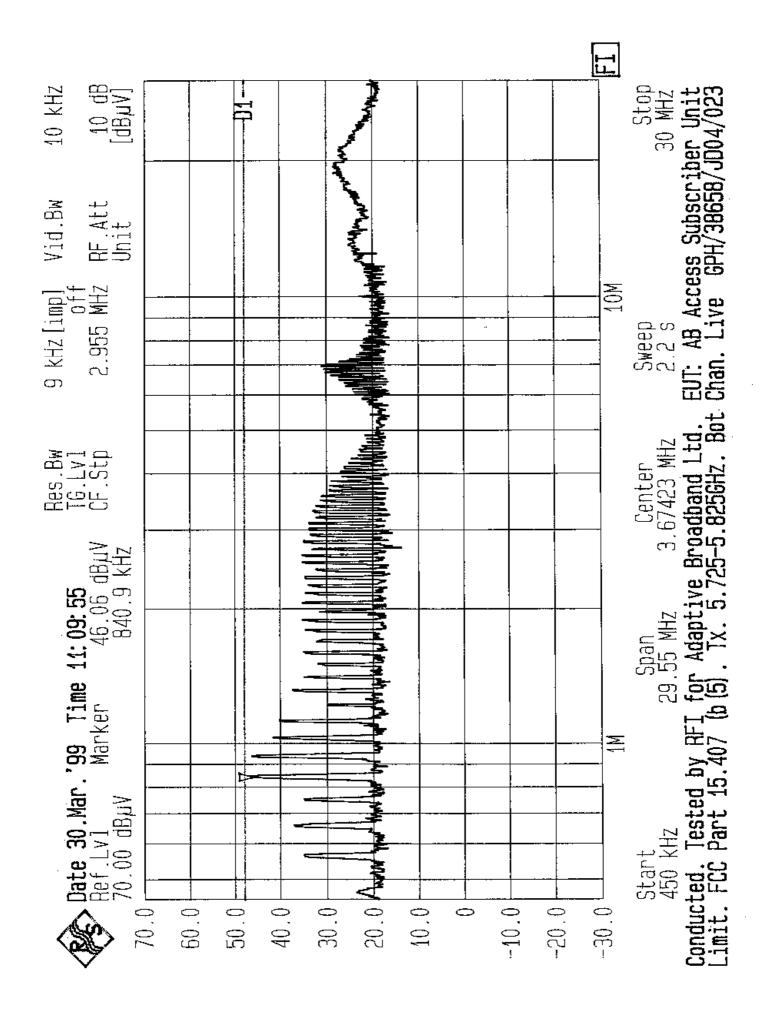


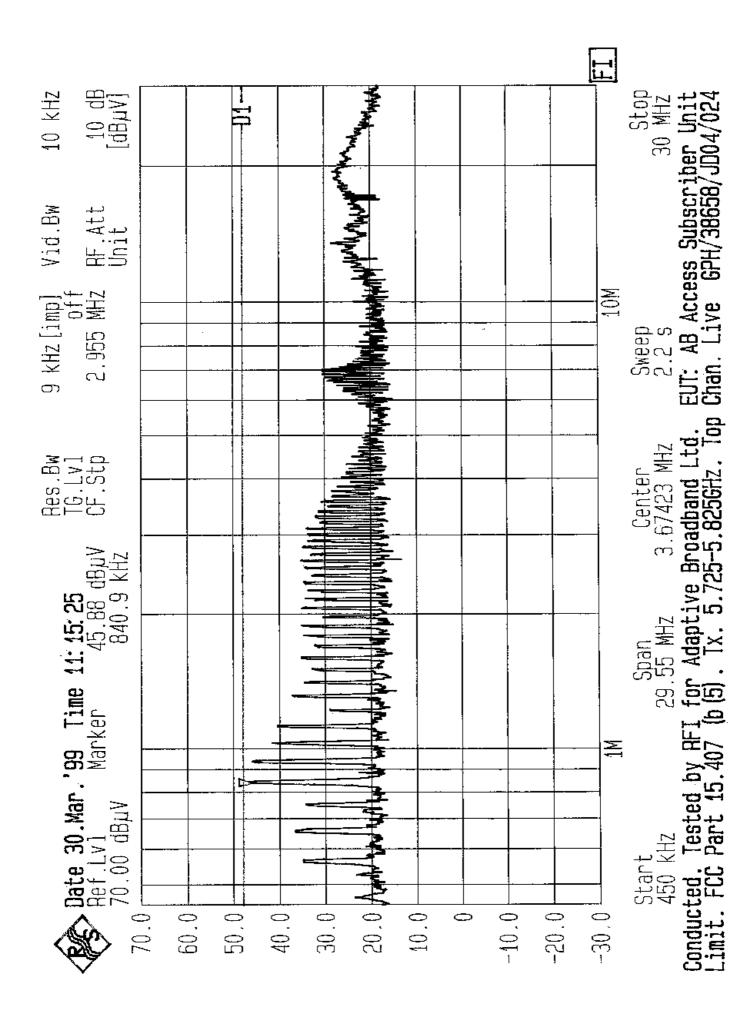


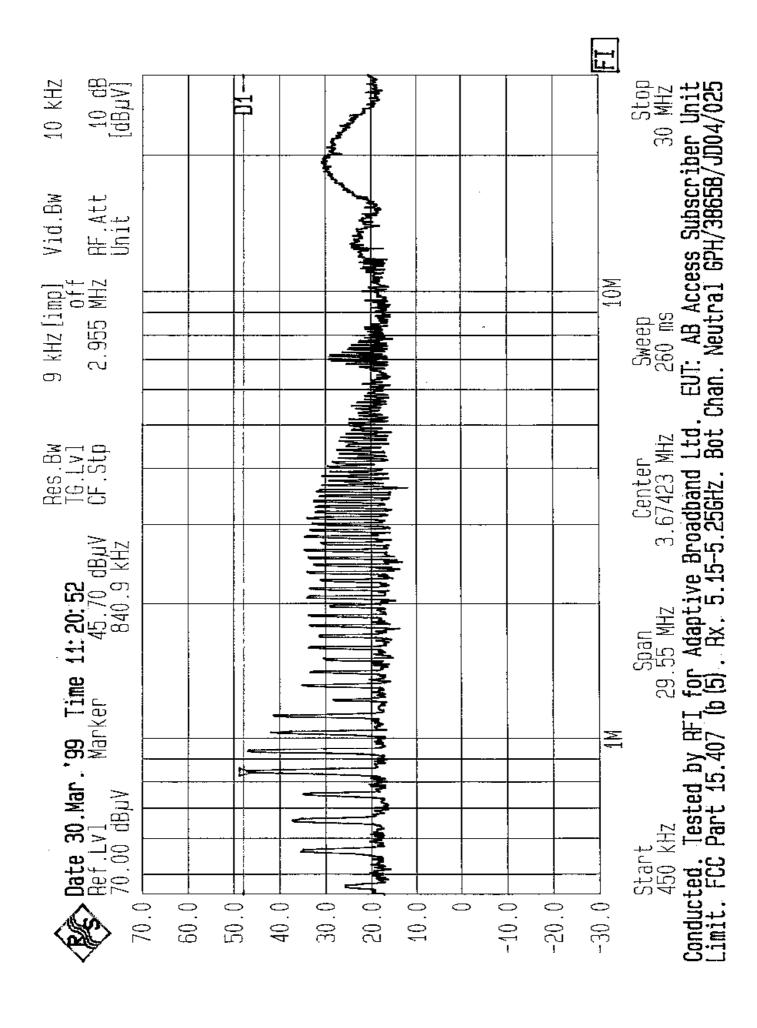


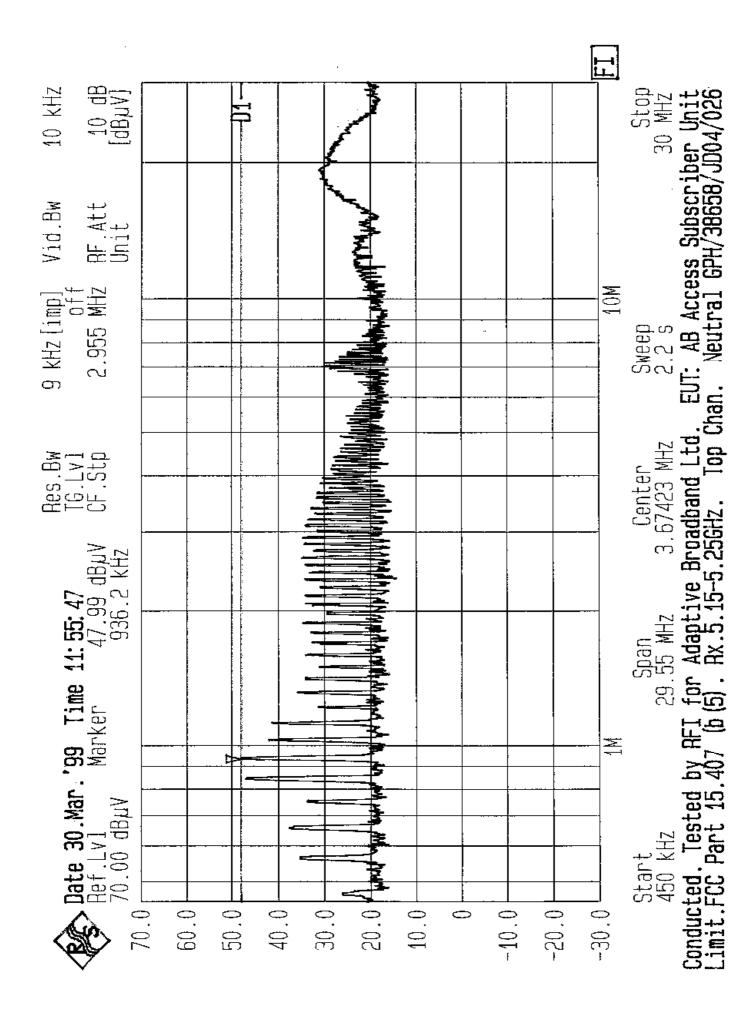


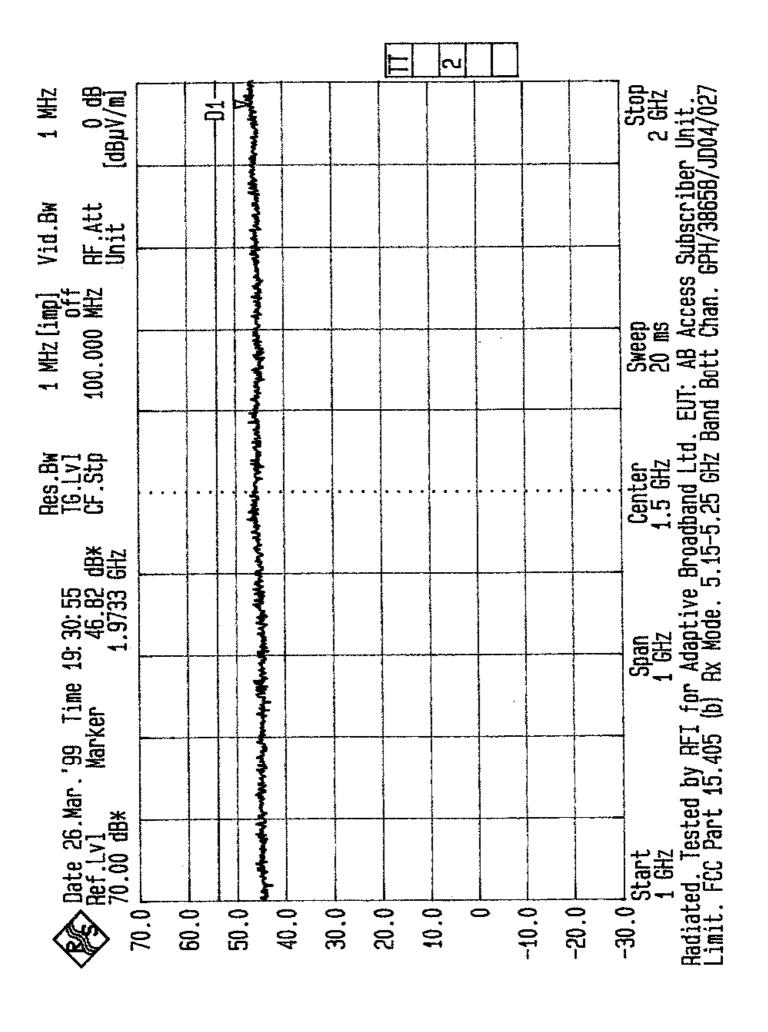


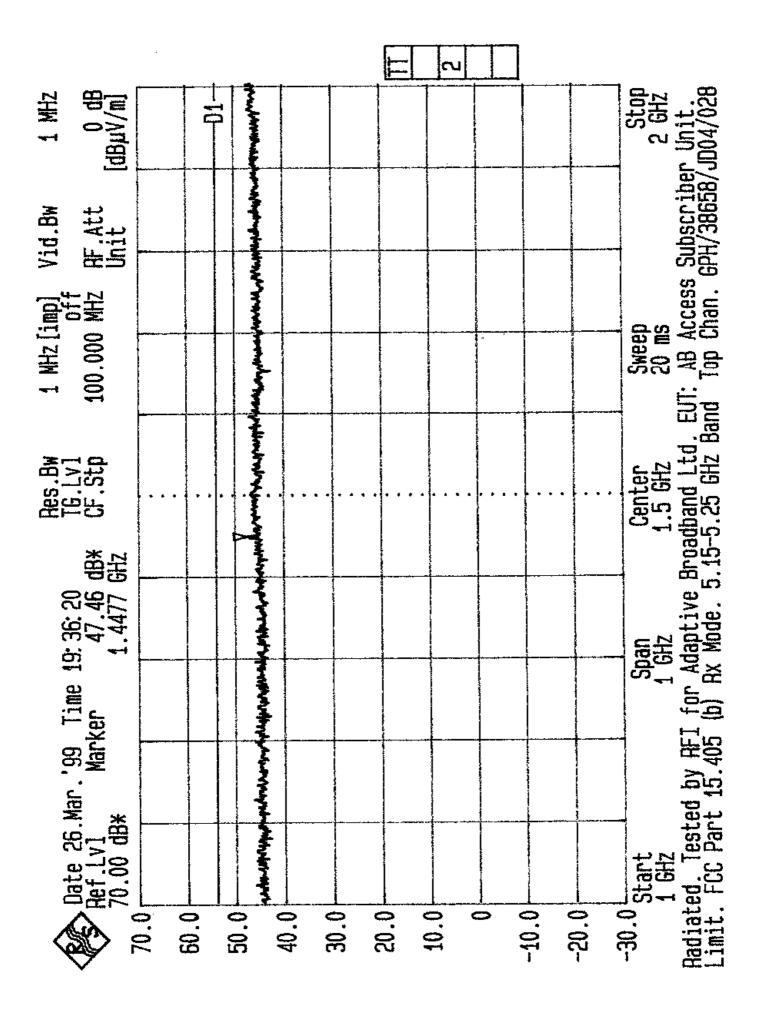


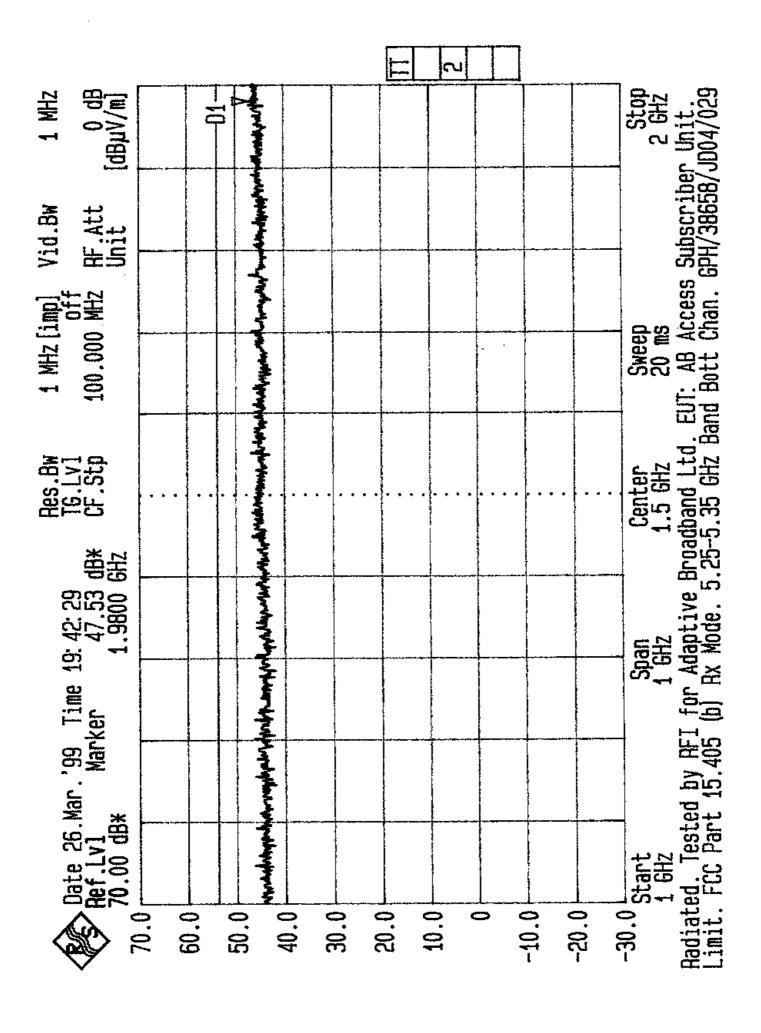


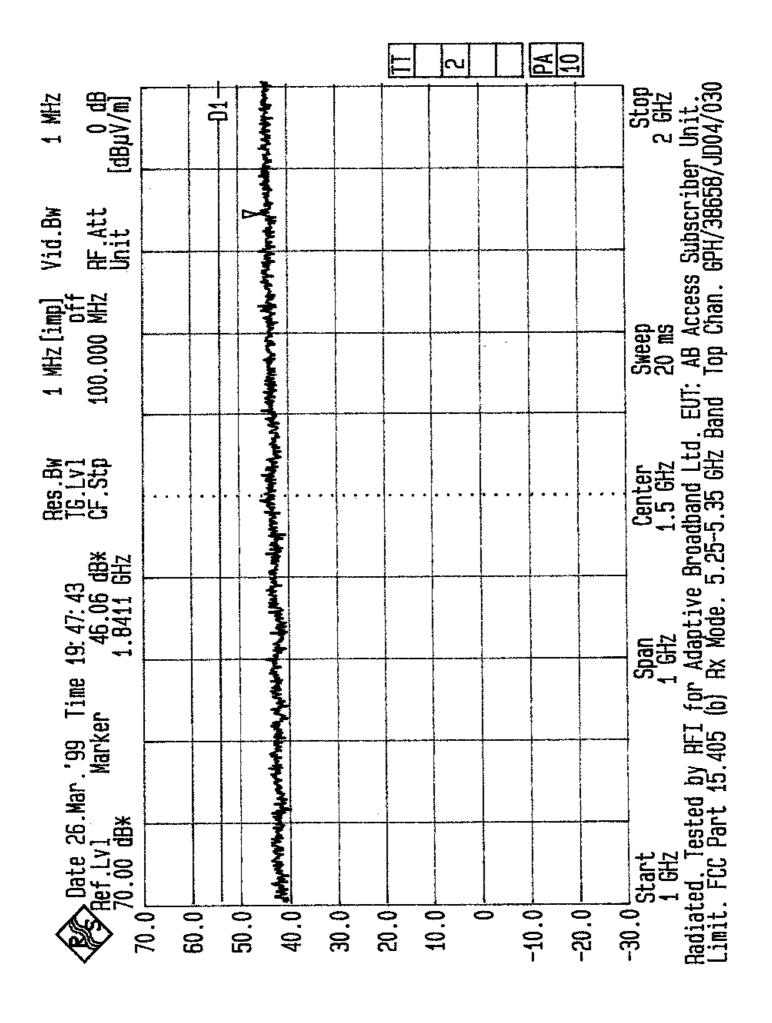


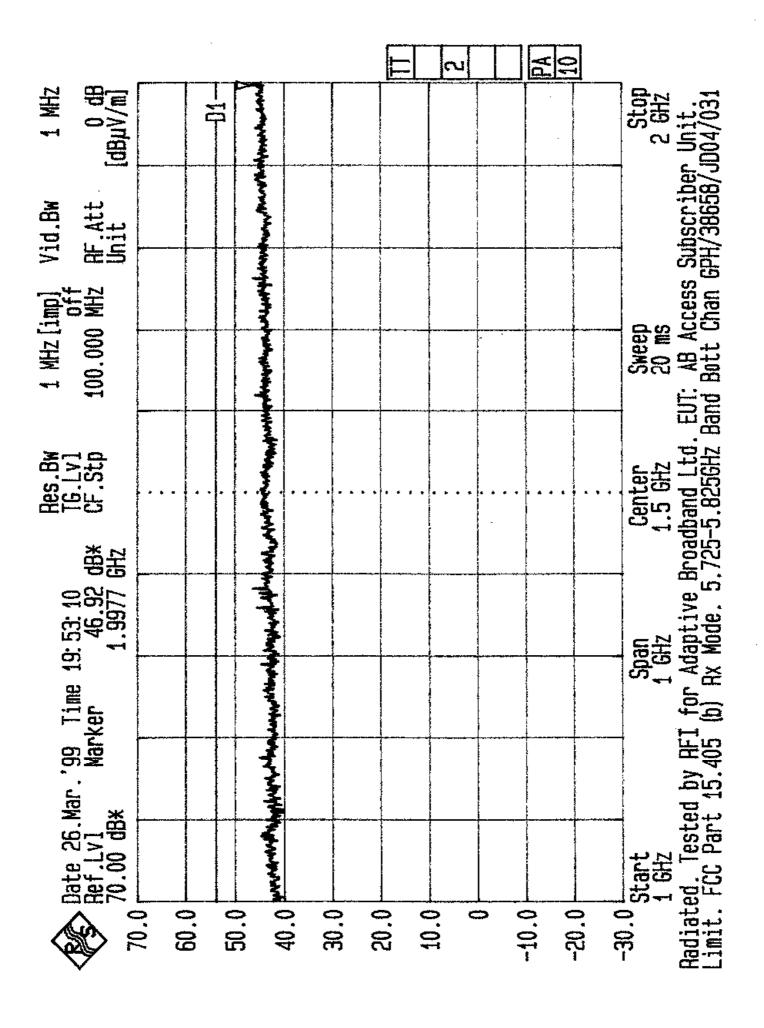


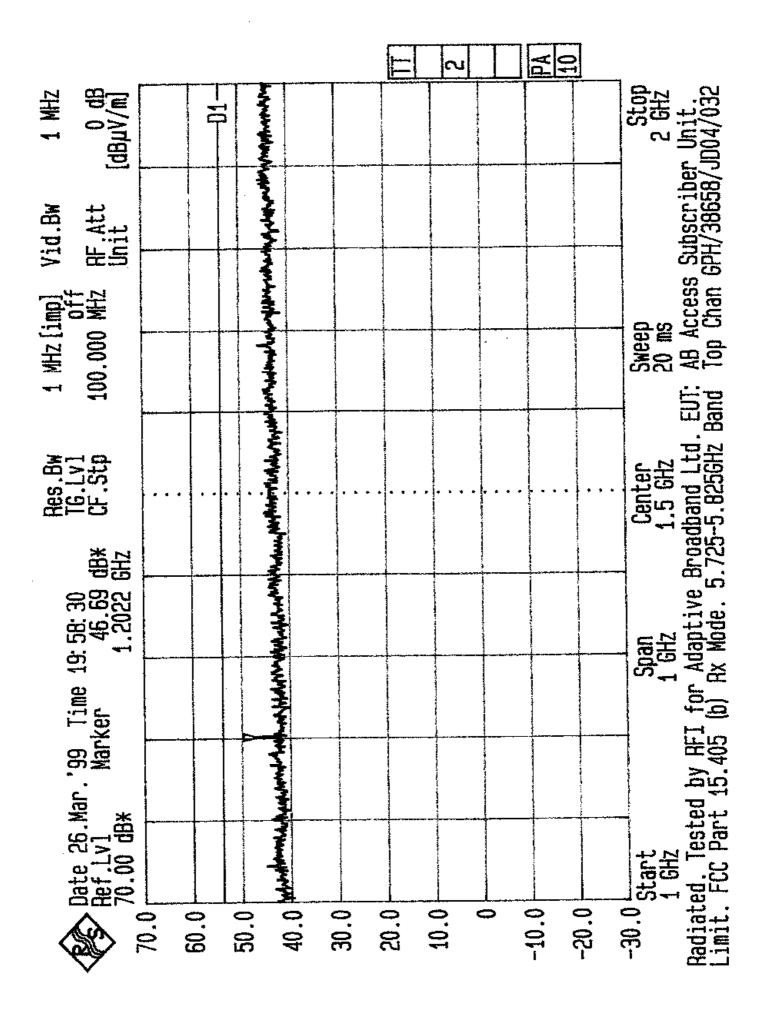


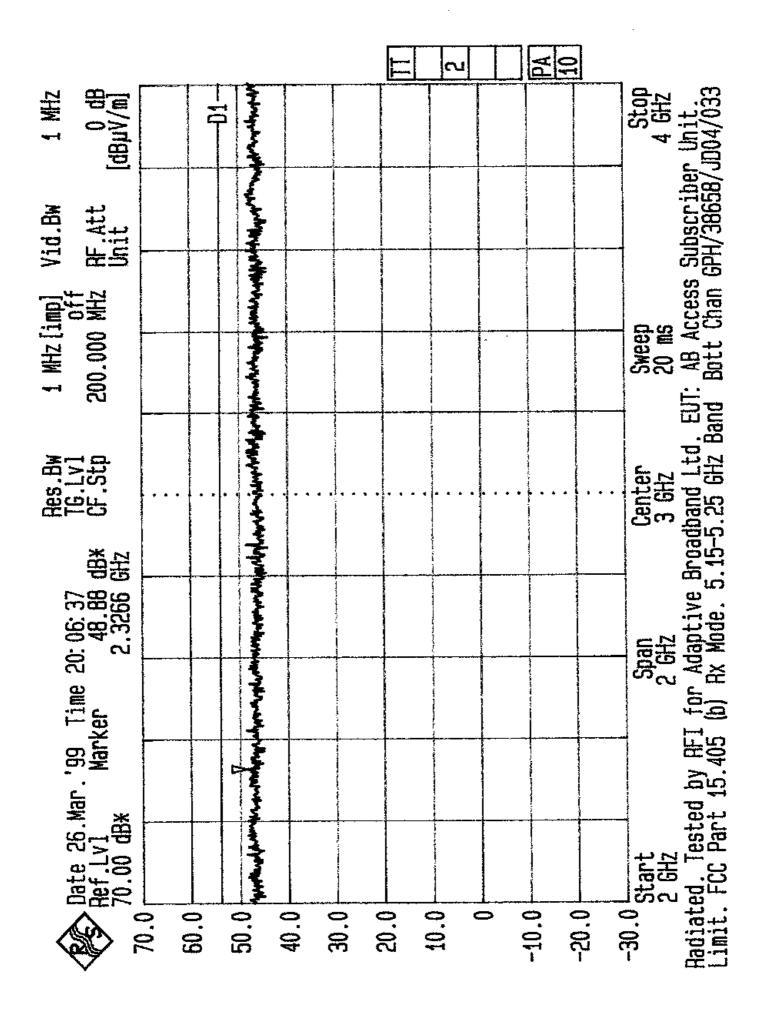


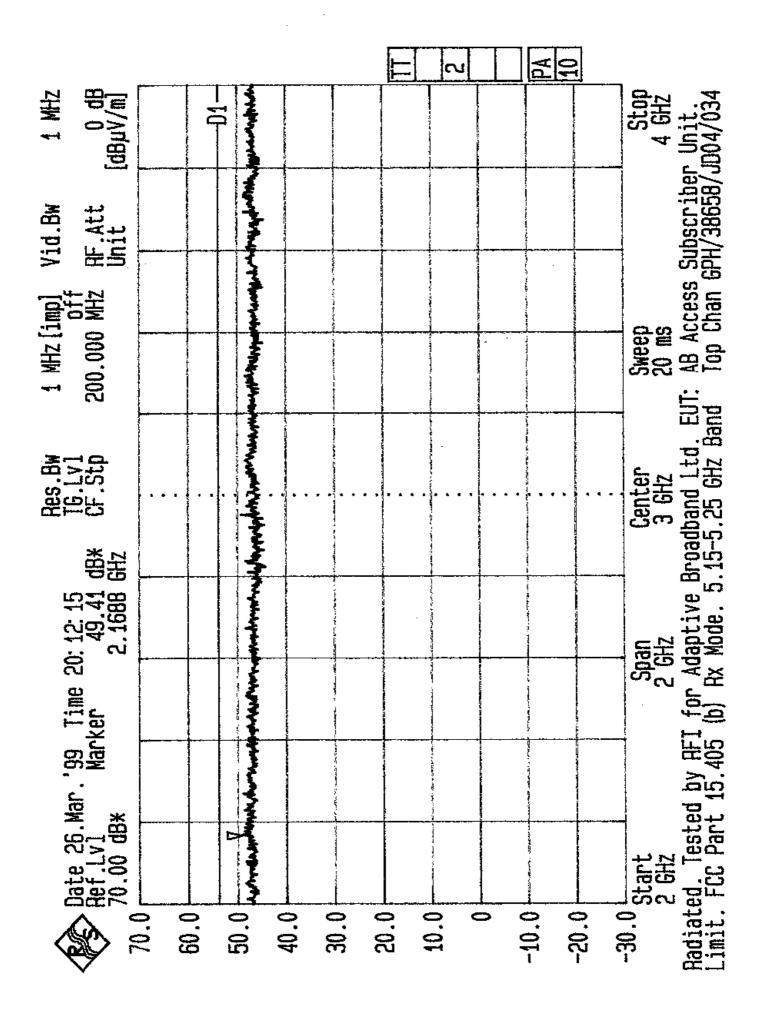


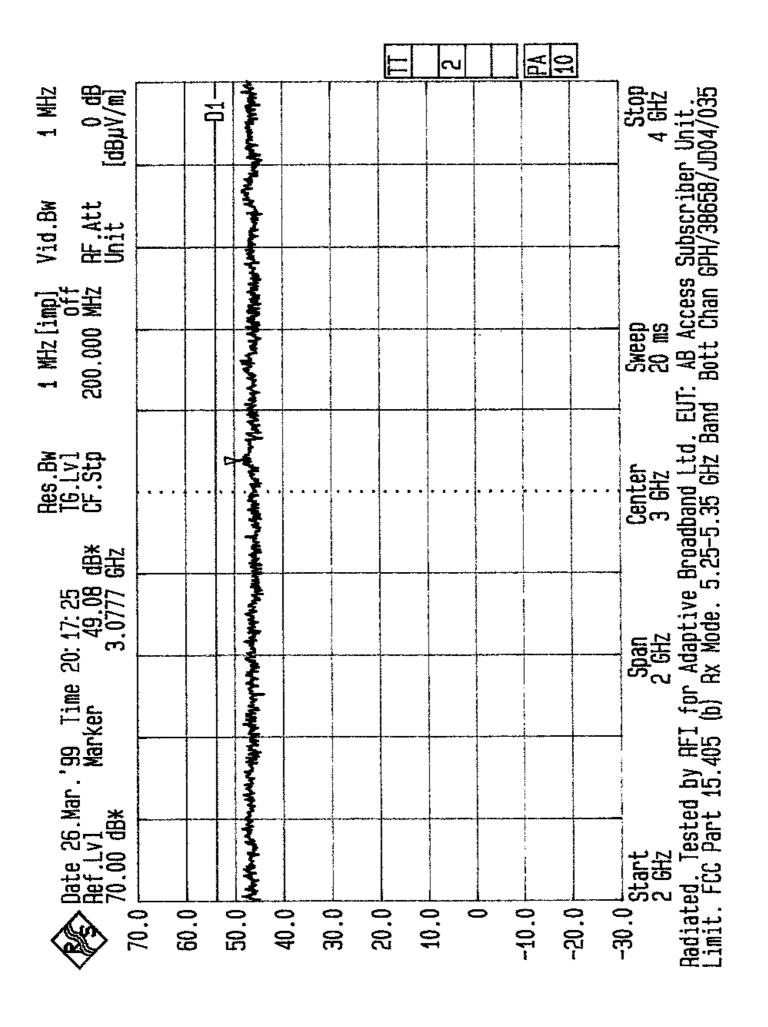


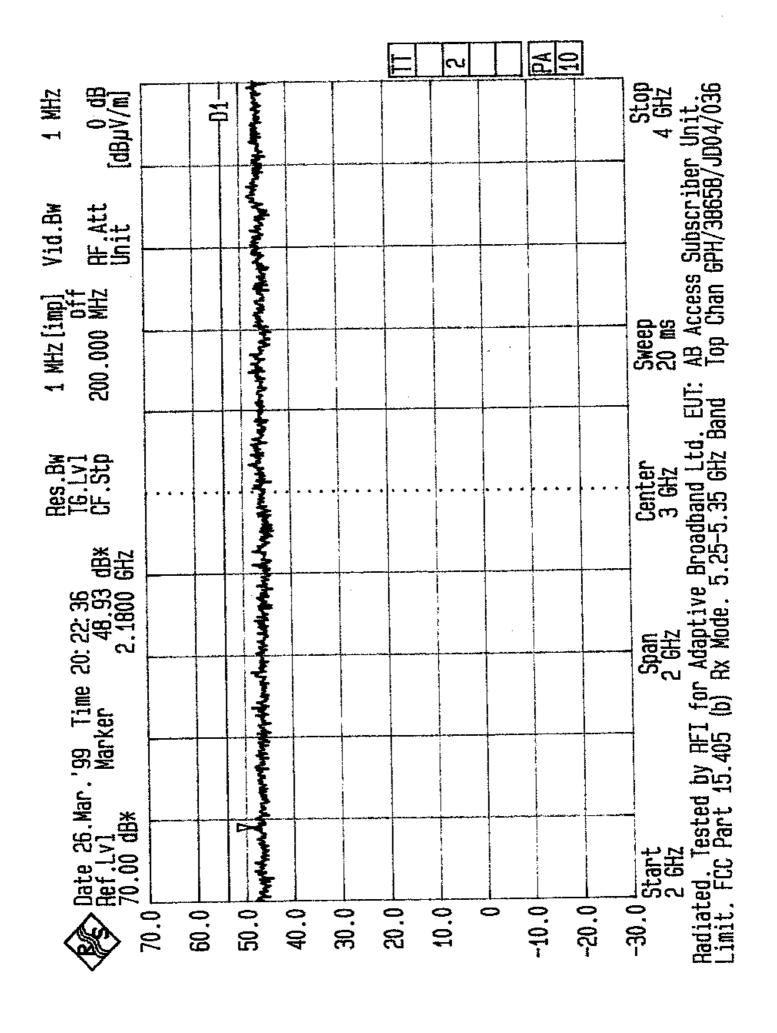


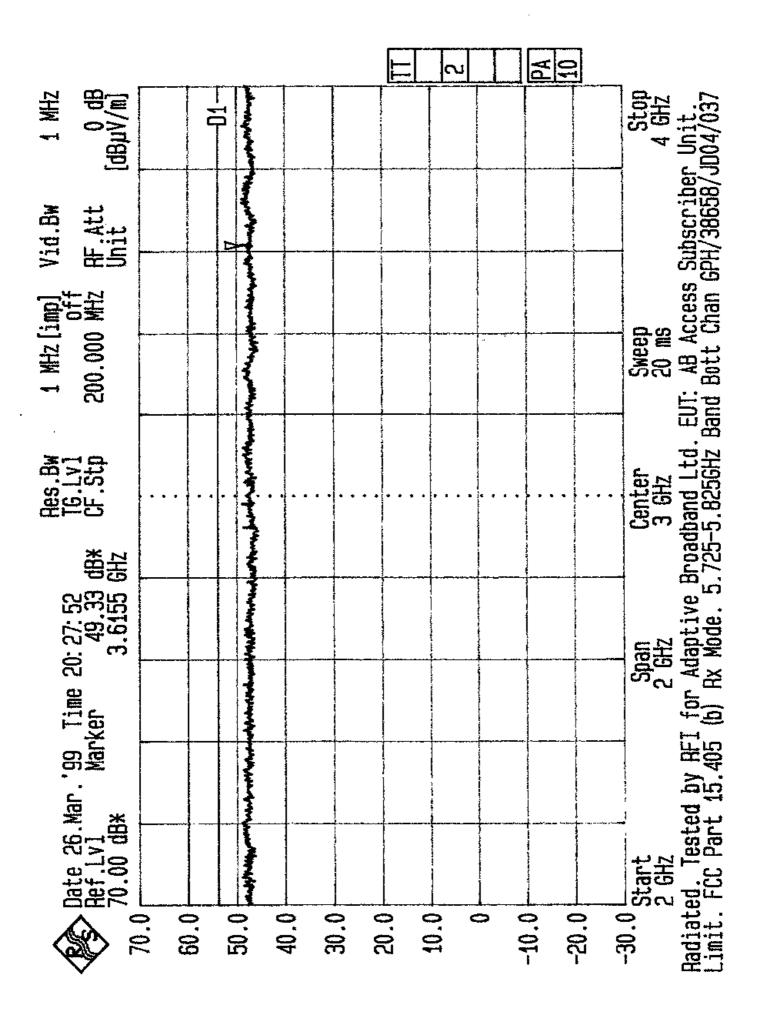


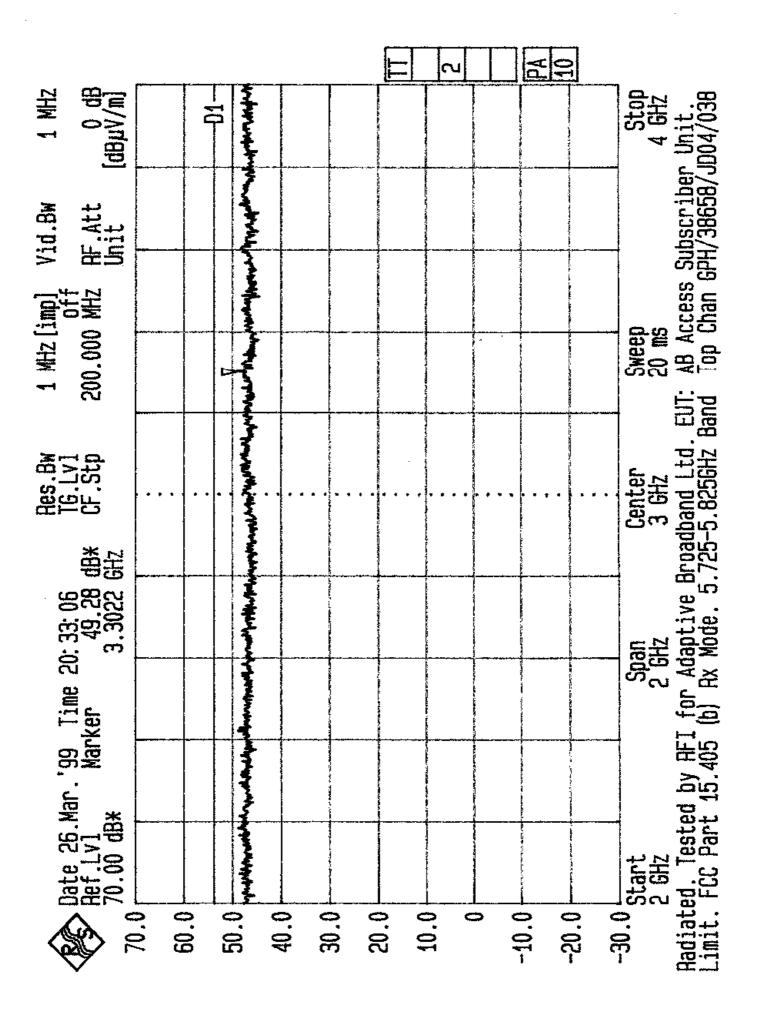




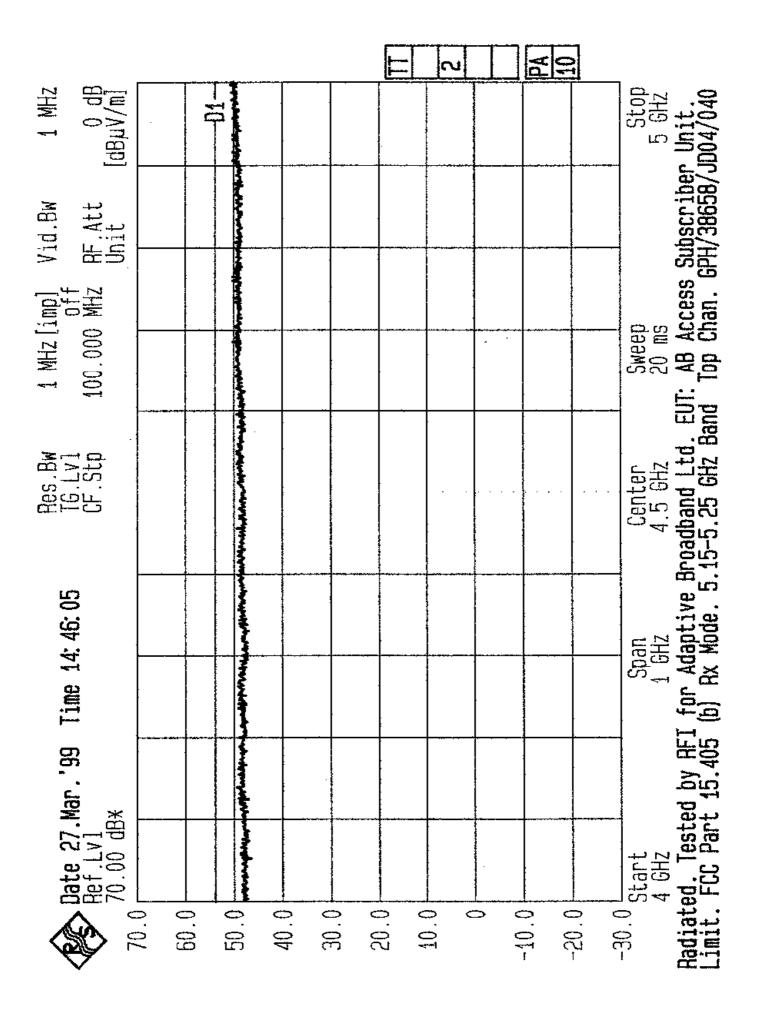


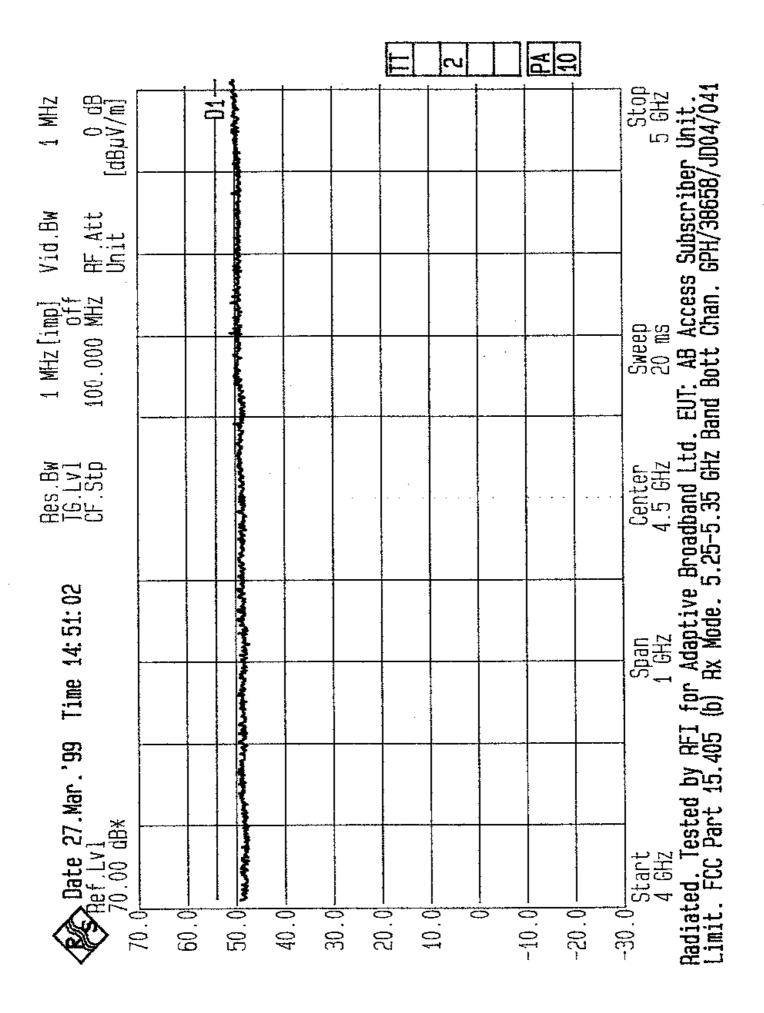


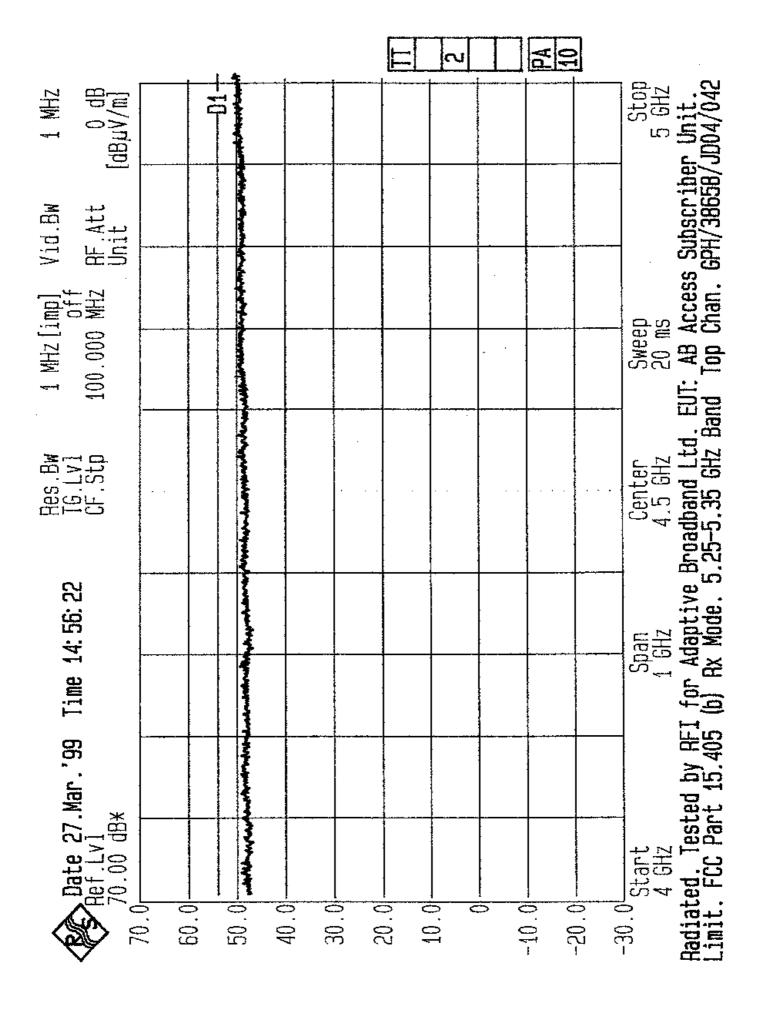


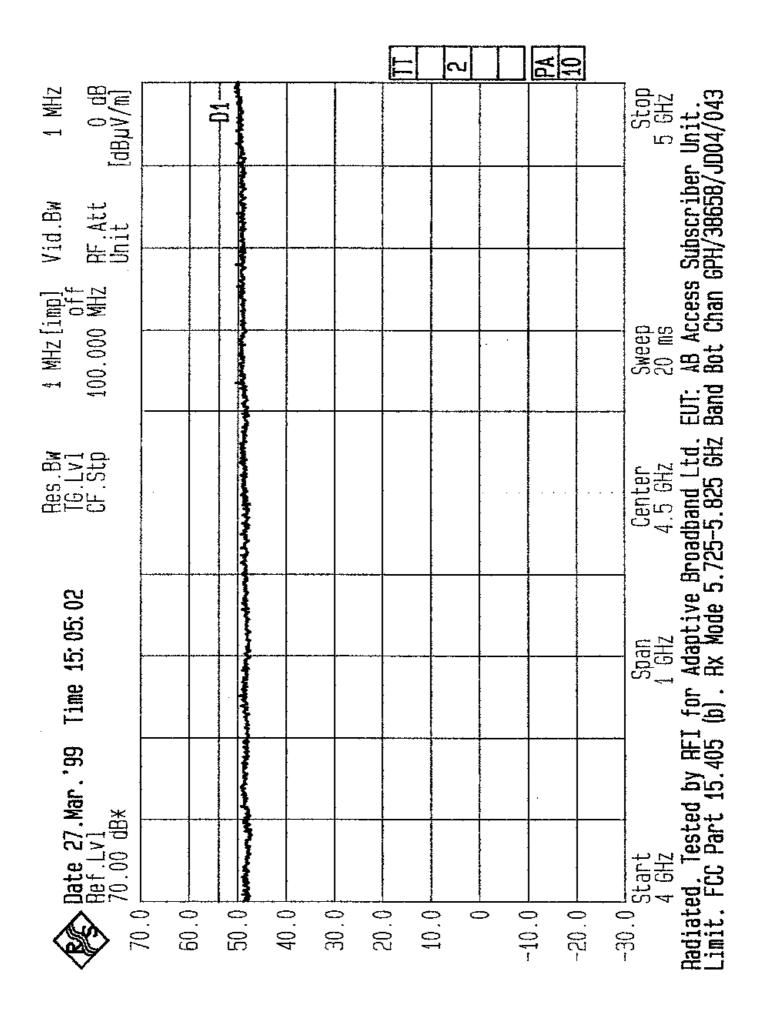


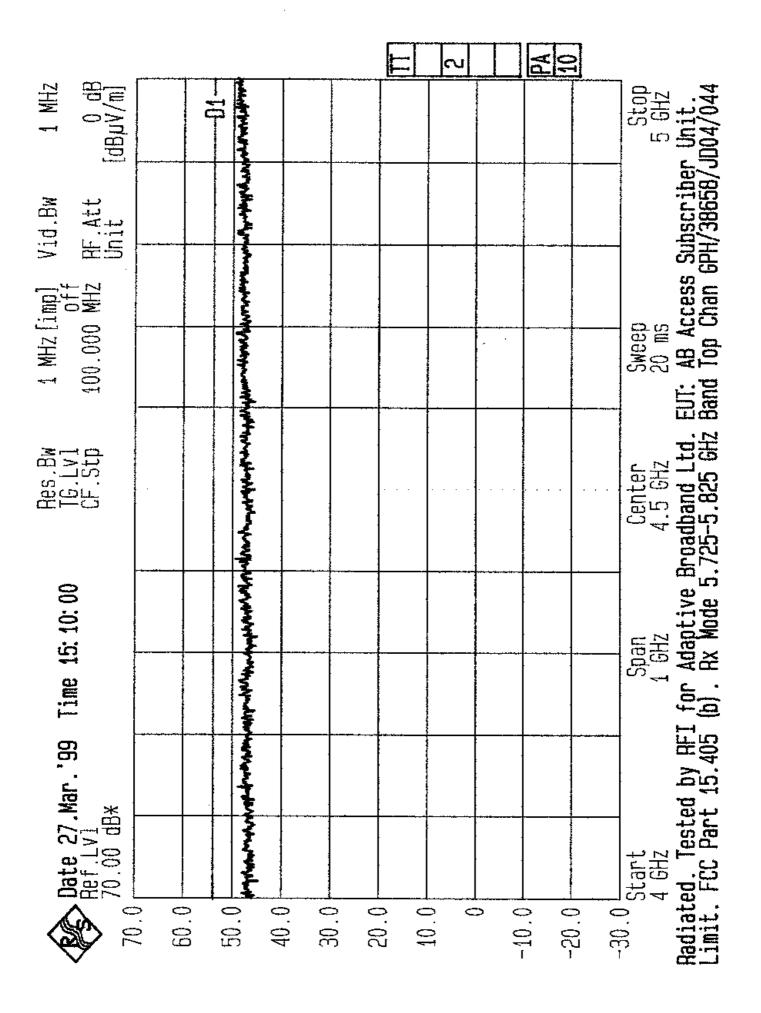
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Vid.Bw RF.Att Unit											Subscribe PH/38658?
1 NHz[imp] 0ff 100 000 MHz											Sweep 20 ms UT: AB Access d Bott Chan. 6
Res.Bw TG.Lv] CF.Stp	: .	A MARKALLA SERVICE CONTRACTOR AND A SEA A SECURITY OF THE SEA OF THE SECURITY	trippingen, and paper and the second								Center 4.5 GHz cadband Ltd. E 5-5.25 GHz Ban
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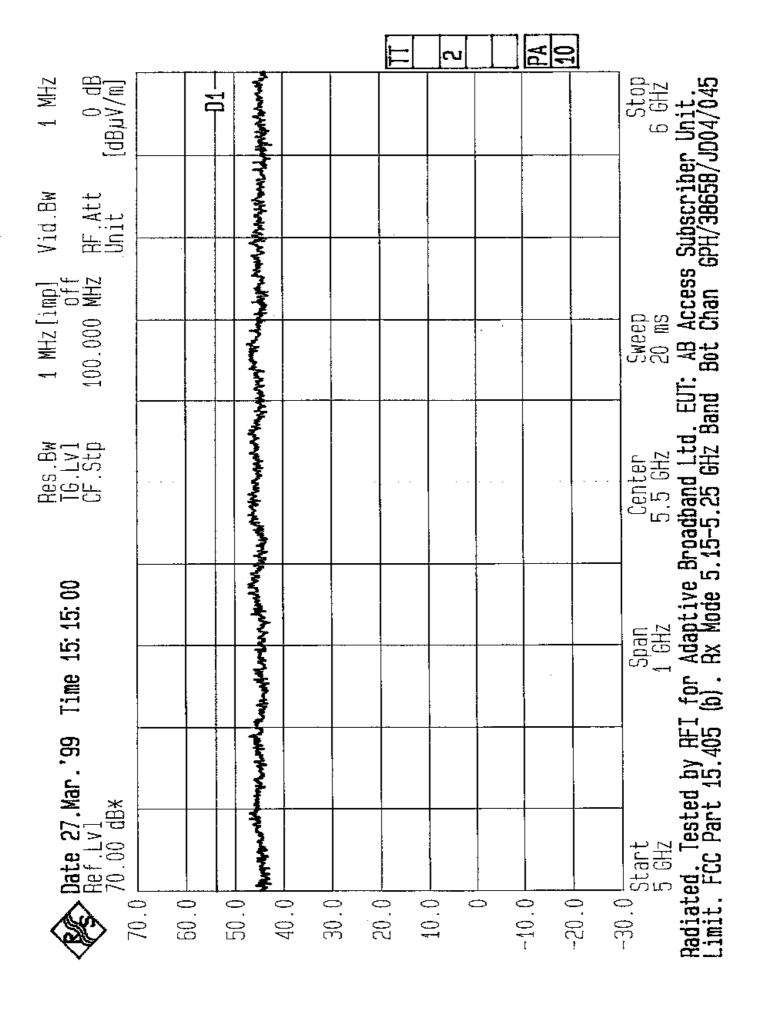




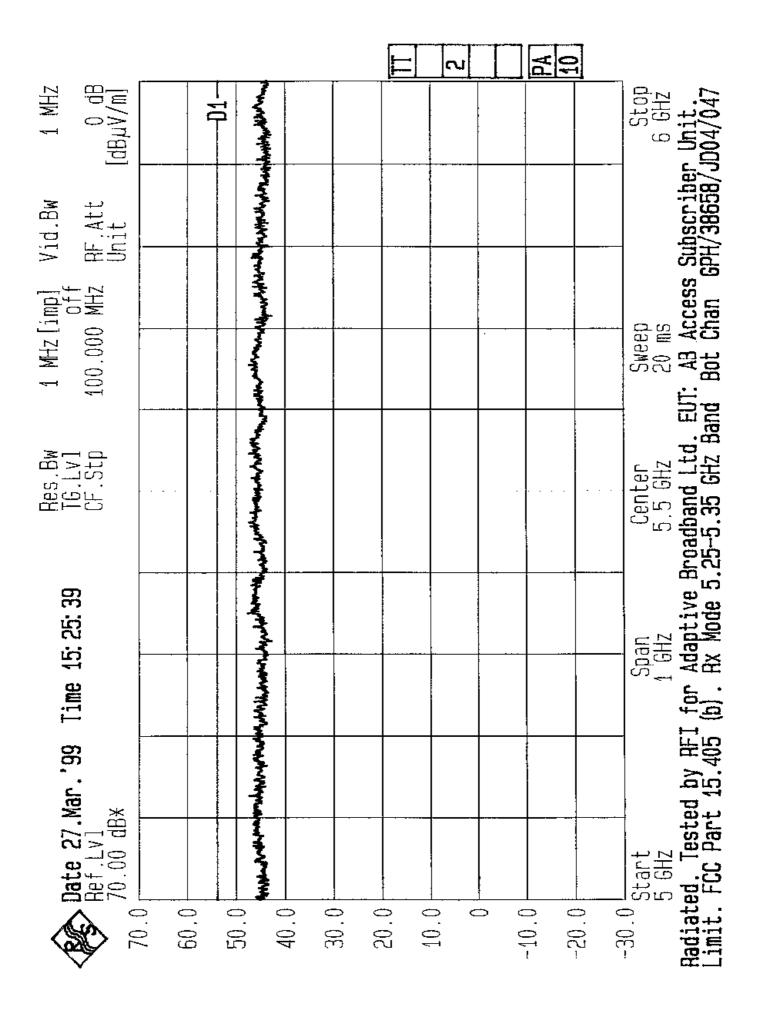




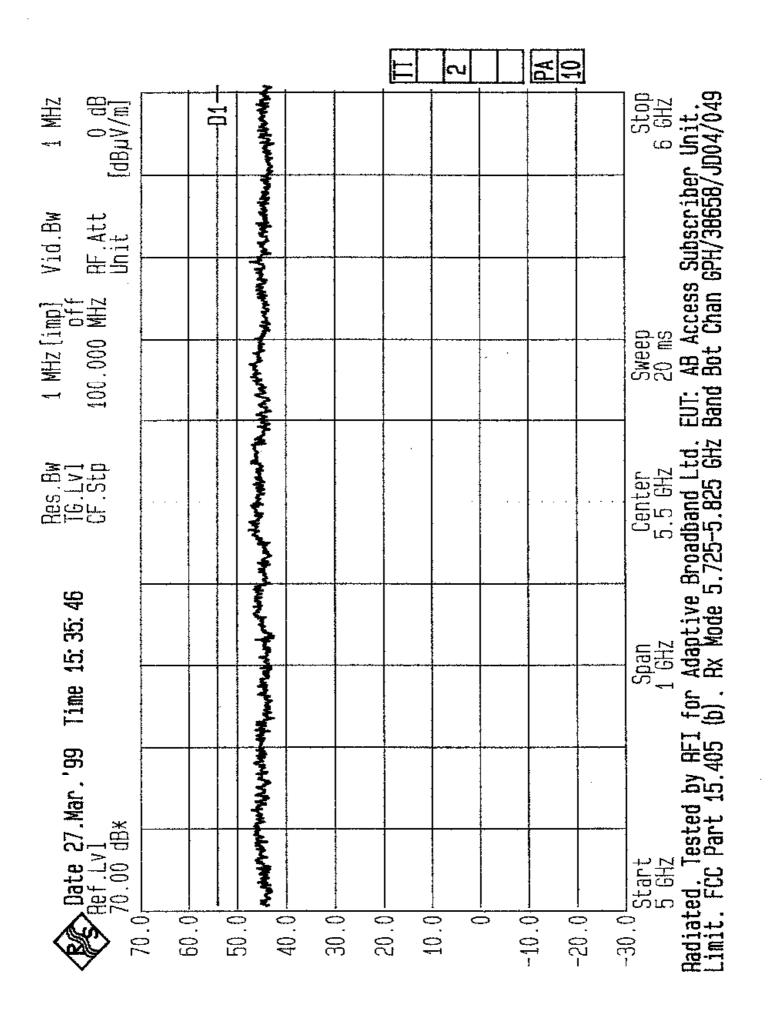


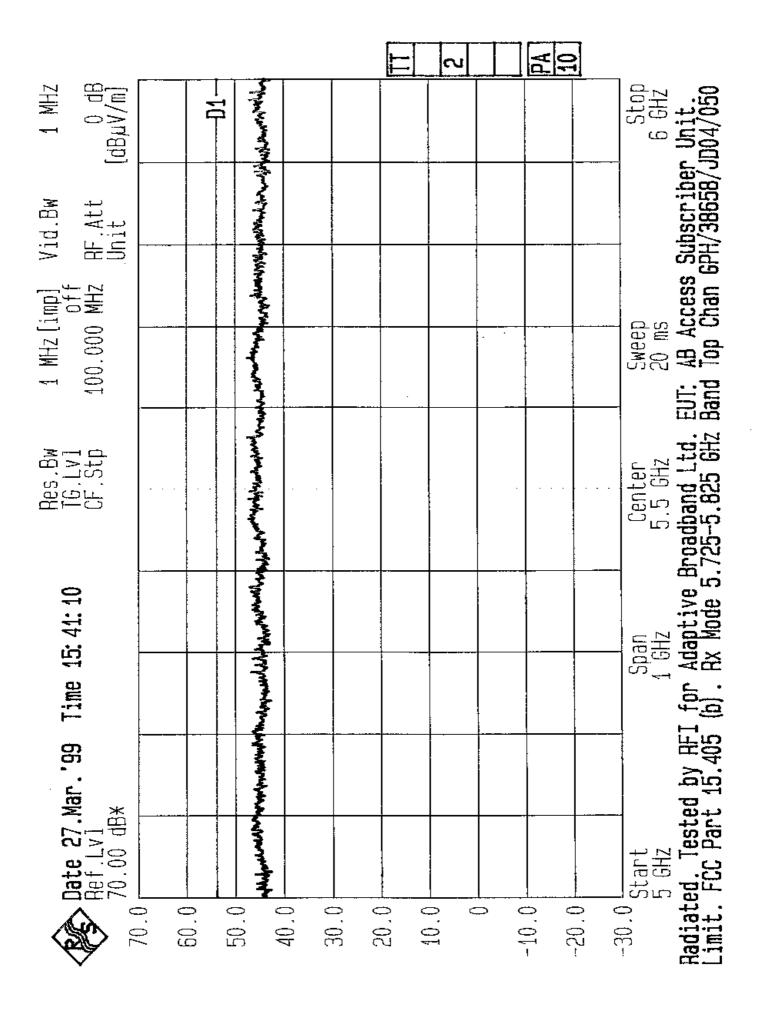


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Date 27. Ref.Lv1 70.00 dB			**								Start 5 6Hz ed. Test FCC Par
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: 30: 37			والمراسيم معاواته والما								an Hz aptive Bi Mode 5.
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Jate 27. Bef.Lvl 70.00 dB			بلاق المعجوبة ويري								Start 5 GHz 9d. Test FCC Par
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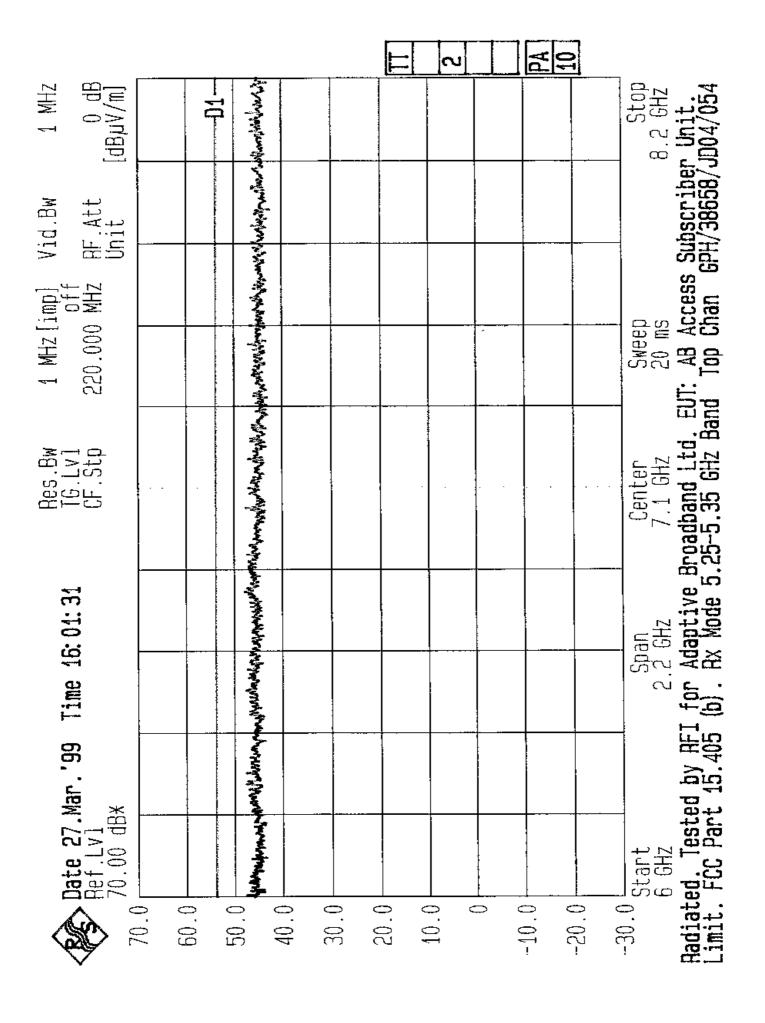




Date 27.Mar. 99 Ref.Lv1 70.00 dB*	Time 15:46:25	TG.Lv] CF.Stp	220.000 MHz RF.Att Unit	RF.Att 0 dB Unit [dBµV/m]
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-30.0 Start 6 GHz	Span 2.2 GHz	Center 7.1 GHz Proadband Ltd. E	Stop Start Span Center Sweep Stop Stop 2.2 GHz 7.1 GHz 20 ms 8.2 GHz Broadband Ltd. EUT: AB Access Subscriber Unit.	Stone B.2 GH Brit.

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1 MHZ 0 dB [dBµV/m]		-10	Hedrog Missings								Stop 8.2 GHZ Unit
Vid.Bw RF.Att Unit	:		Enter Anna Particular							<u>.</u>	ubscriber H/38658/
			Personal James Andreas								ap IIS Access S Chan GP
1 MHz[imp] 0ff 220.000 MHz			المجادرة المجامعة المجادرة								Swell 20 r EUT: AB
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: 51: 26			And the property thanks								an GHz aptive B l Mode 5.
Time 15:			A CHARLES								Solution Ad (b) . Rx
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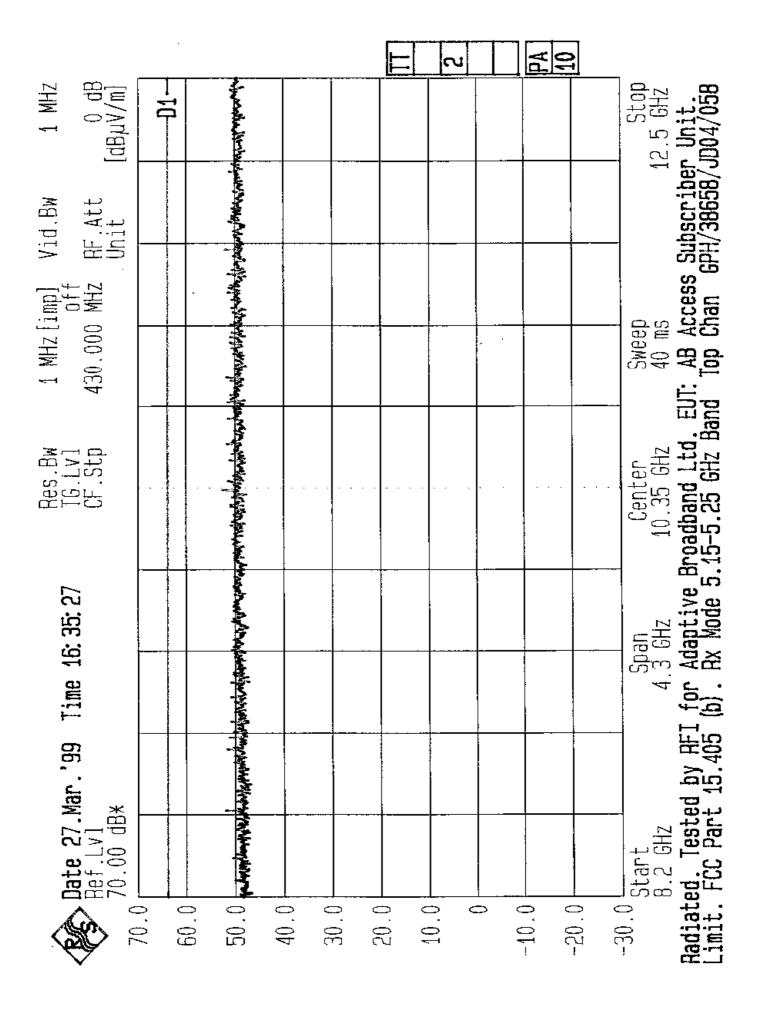


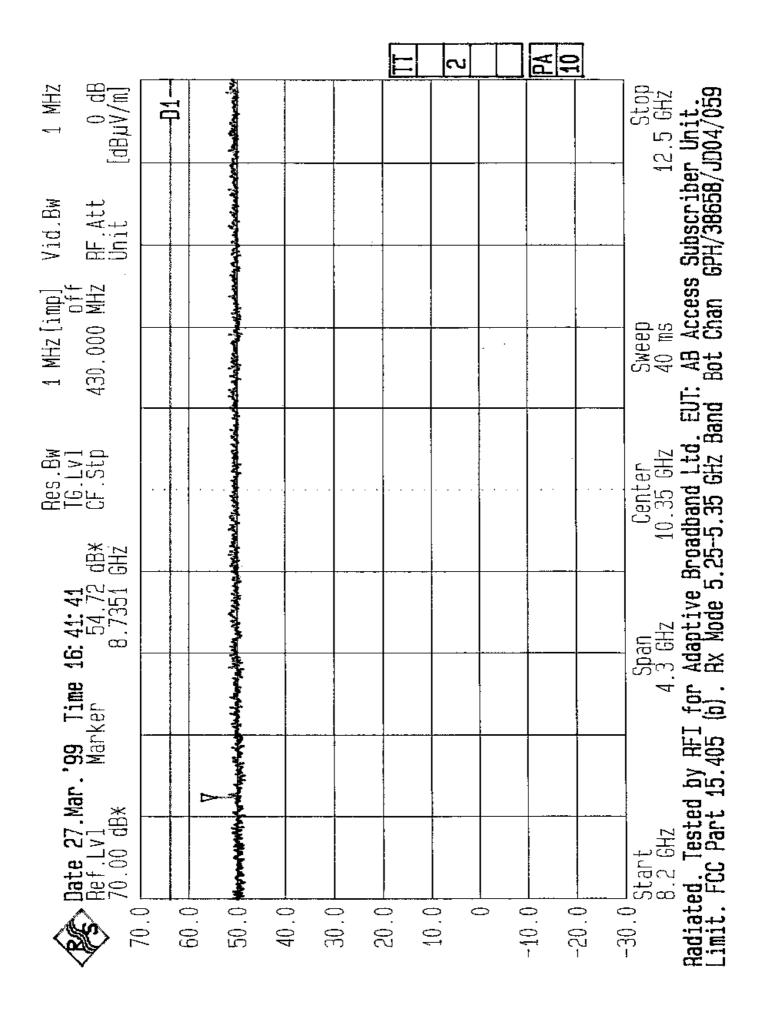
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Pes.Bw V1 dB* White 16: 06: 39 Fig. Lv CF. Stp White			والمراد المراد ا				Sween 20 ms
27. Mar. '99 Time 16: 06: 39 V1 dB* White the control of the co	Res.BW TG.Lvl CF.Stp		mod have recognized in the second				 Center 7.1 GHZ
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1 MHz 0 dB [dBµV/m]		-17	Water State of the								Stop 8.2 GHZ r Unit
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1 MHz[imp] off 220.000 MHz		, bad (Pilato), had be desired in the second	A STANSON STANSON					<u> </u>			Stop 20 ms 20 ms AB Access Subscriber Unit. d Top Chan GPH/38658/JD04/056
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> Date 27.Mar. 99 Ref.Lvl 70.00 dB*			And Applications								Start 6 GHz ted. Tes l
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$\begin{array}{cc} 1 \text{ MHz} \\ 0 \text{ dB} \\ [\text{dB}\mu\text{V/m}] \end{array}$	-01-									Stop 12.5 GHZ Unit. JD04/057
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1 MHZ[imp] 0ff 430.000 MHZ		والمجاولة والمتاولة								Stop Start 8.2 GHz Radiated. Tested by RFI for Adaptive Broadband Ltd. EUT: AB Access Subscriber Unit. FCC Part 15.405 (b). Ax Mode 5.15-5.25 GHz Band Bot Chan GPH/38658/JD04/057
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Res.Bw TG.LvI dB* CF.Stp GHz		الإفاركة والمساورة والمساورة والما						 , .	,	Center 10.35 Gl coadband L 15-5.25 GH
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• Date 27.Mar.*99 Time 16:30:09 Ref.Lvl 70.00 dB*		50.0 Vierentantschaftspi								Start 8.2 GHz :ed. Test FCC Par
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1 MHZ 0 dB [dBµV/m]					 Stop 12.5 GHz Unit. JD04/060
Vid.Bw RF.Att Unit				# NB-4	Subscribe 6PH/38658/
1 MHz[imp] off 430.000 MHz	in the state of th				Sweep 40 ms 1: AB Access Top Chan
Res.Bw TG.Lvl CF.Stp					Center Sweep Stop 10.35 GHz 40 ms 12.5 GHz AB Access Subscriber Unit. 10.95 GHz AB Access Subscriber Unit. 10.95 GHz Band Top Chan GPH/38658/JD04/060
09: 45 52. 46 dB* .8545 GHz					10 11 10 10 10 10 10 10
Date 27.Mar.'99 Time 17:(Ref.Lvl 70.00 dB*	A james post part part part part part part part par				Span 4.3 GF T for Adap 5 (b) Rx M
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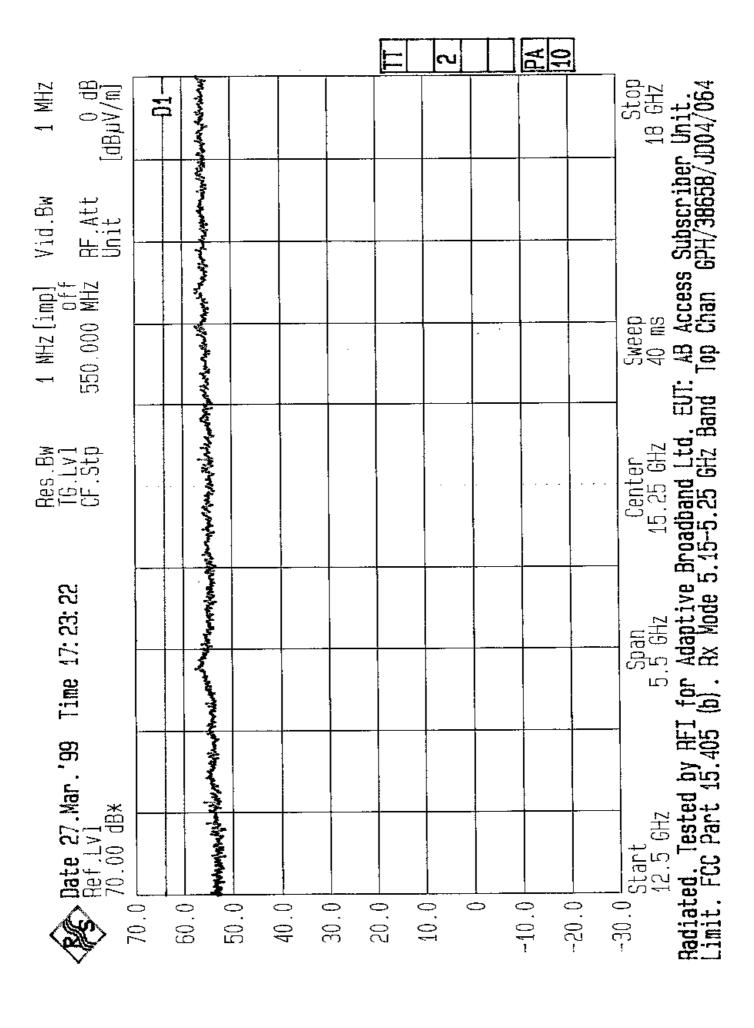
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		Accordinately (Accordinately)								12.5
J Vid.Bw Ff IZ RF.Att Unit										
1 MHz[imp] 0ff 430.000 MHz							-			Sweep 40 ms
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Limit. FCC Part 15:405 (b). Ax Mode 5.725-5.825 GHz Band Bot Chan GPH/38658/JD04/061

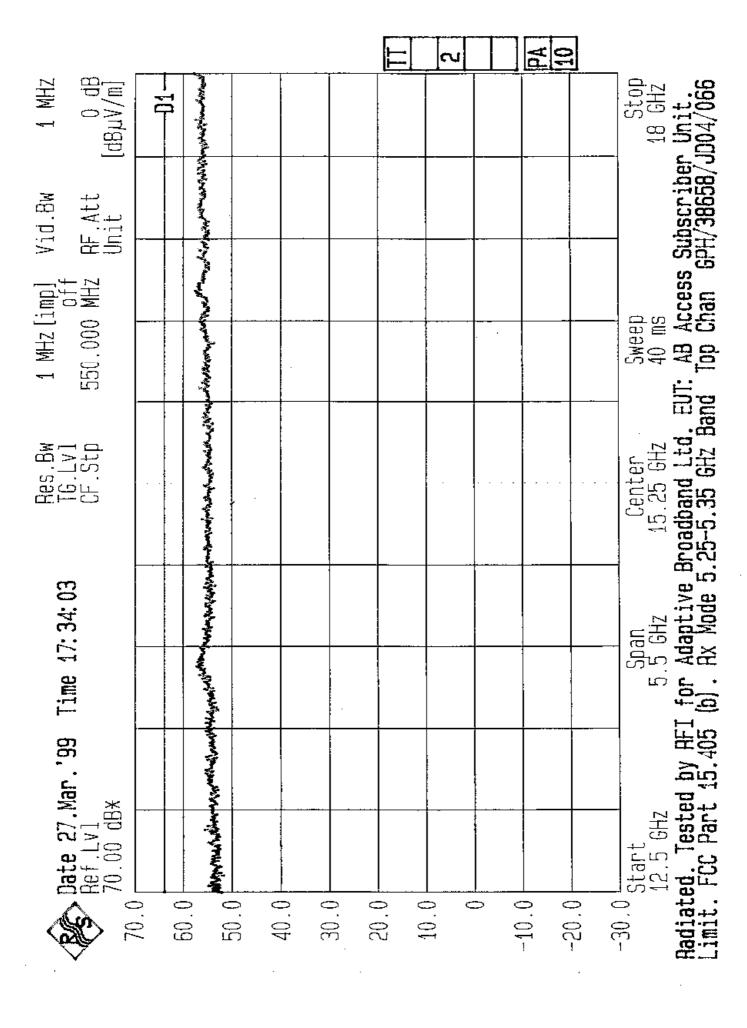
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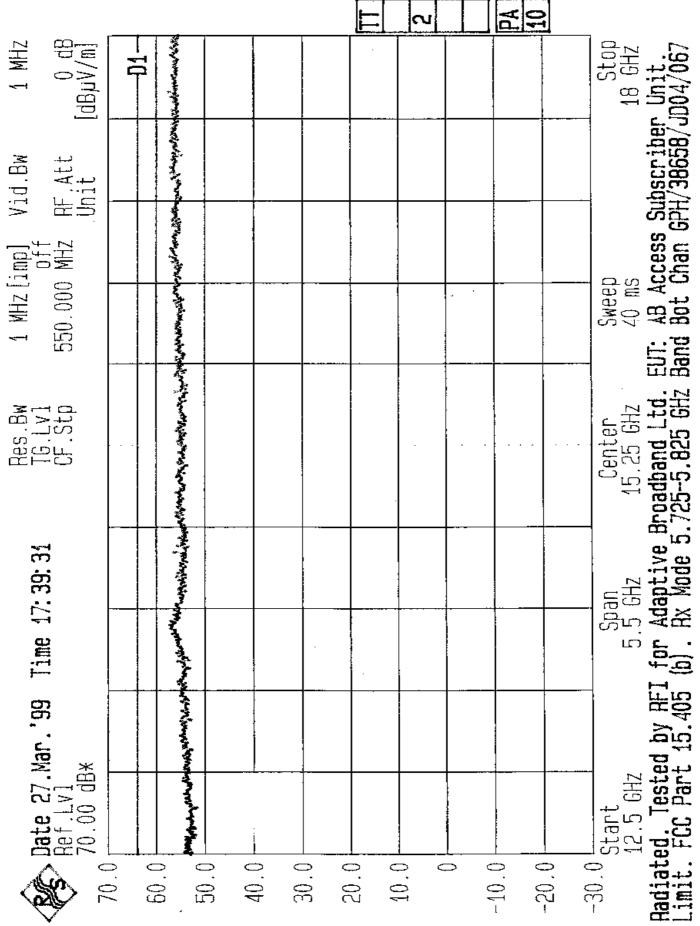
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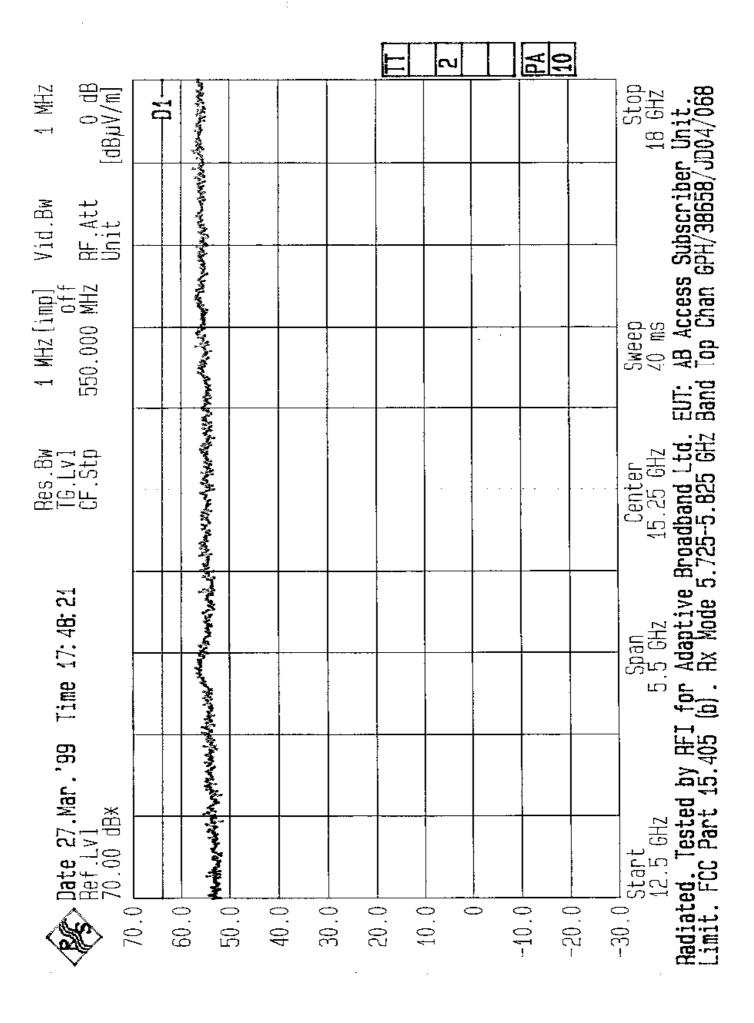
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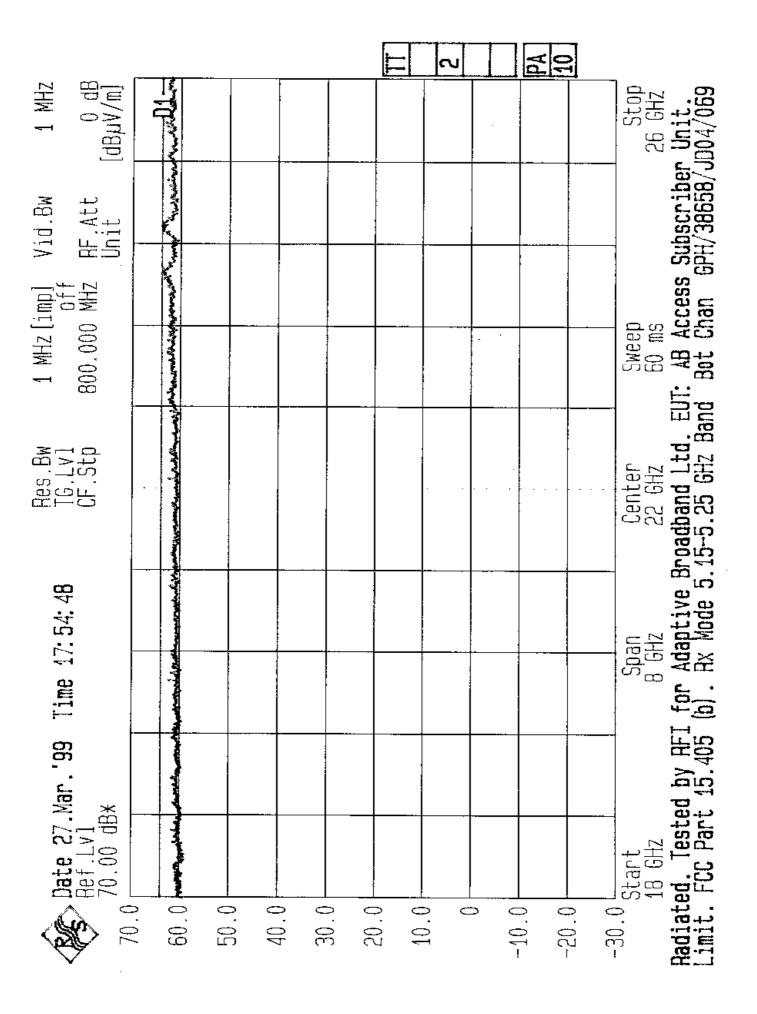


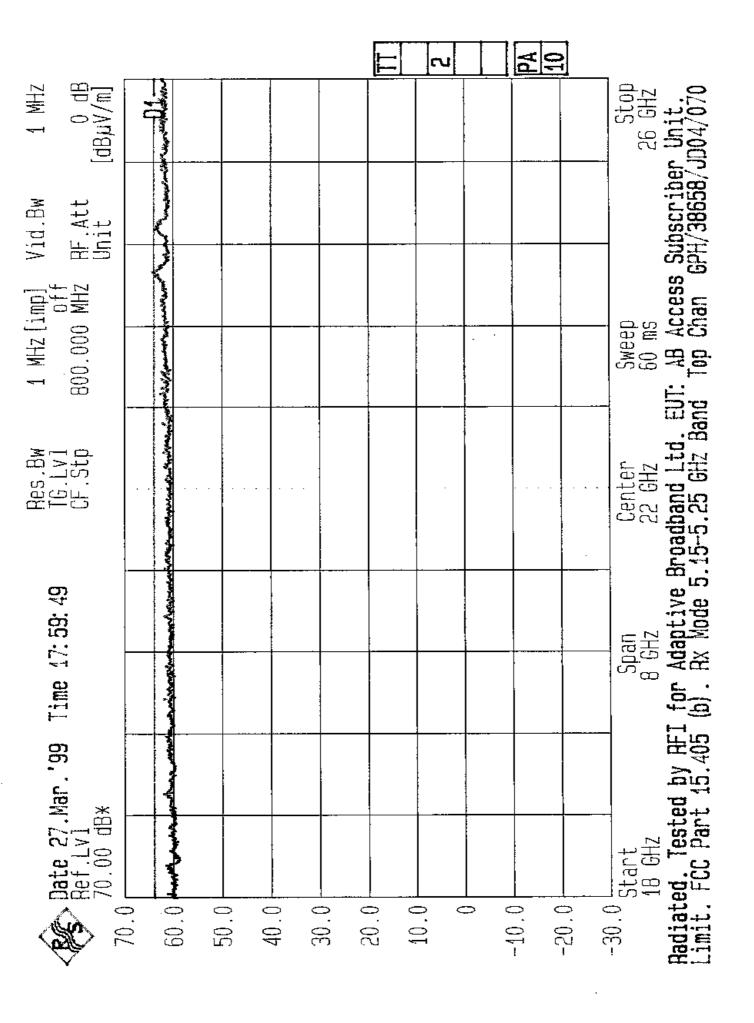
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1 MHz 0 dB [dBµV/m]	-10	ومريته والإوراق والرام والمرام								Stop 18 GHz Unit. JD04/065
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1 MHz[imp] 0ff 550.000 MHz		والمعاونة								veep ms Access Chan Gi
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. Date 27.Mar. '99 Ref.Lv] 70.00 dB*		يدارس المرادسان فأسدا يعتضوا والتأولان الماليون عدامها								Span Center Sweep Stop Stop 15.25 GHz 40 ms 18 GHz Adaptive Broadband Ltd. EUT: AB Access Subscriber Unit. FCC Part 15.405 (b). Rx Mode 5.25-5.35 GHz Band Bot Chan GPH/38658/JD04/065
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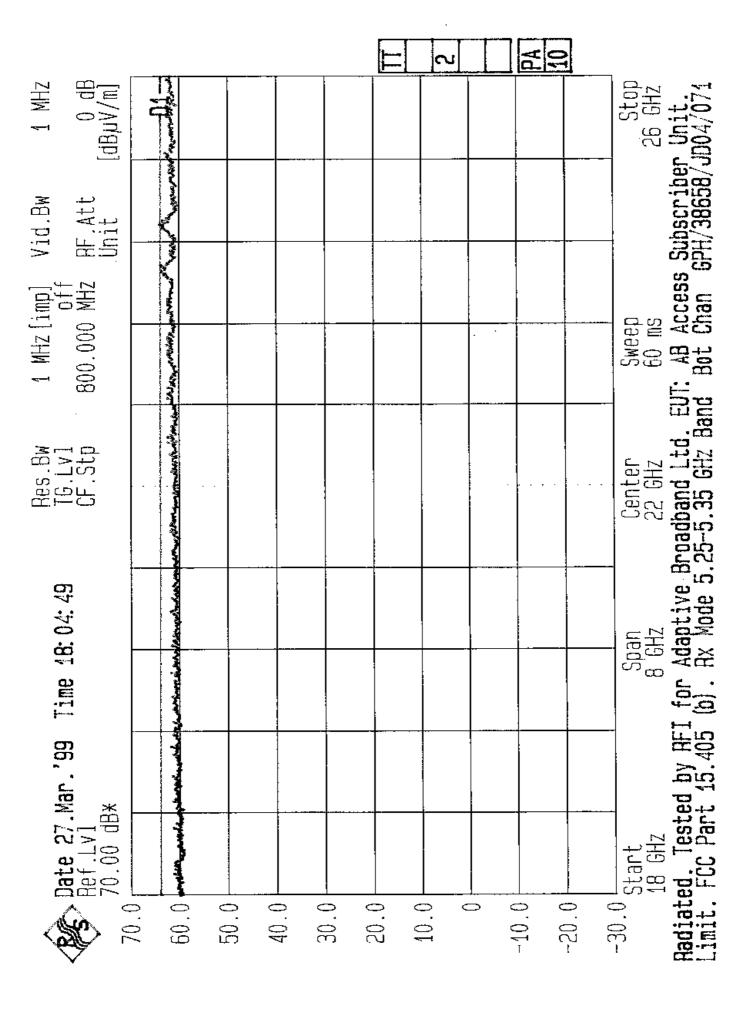


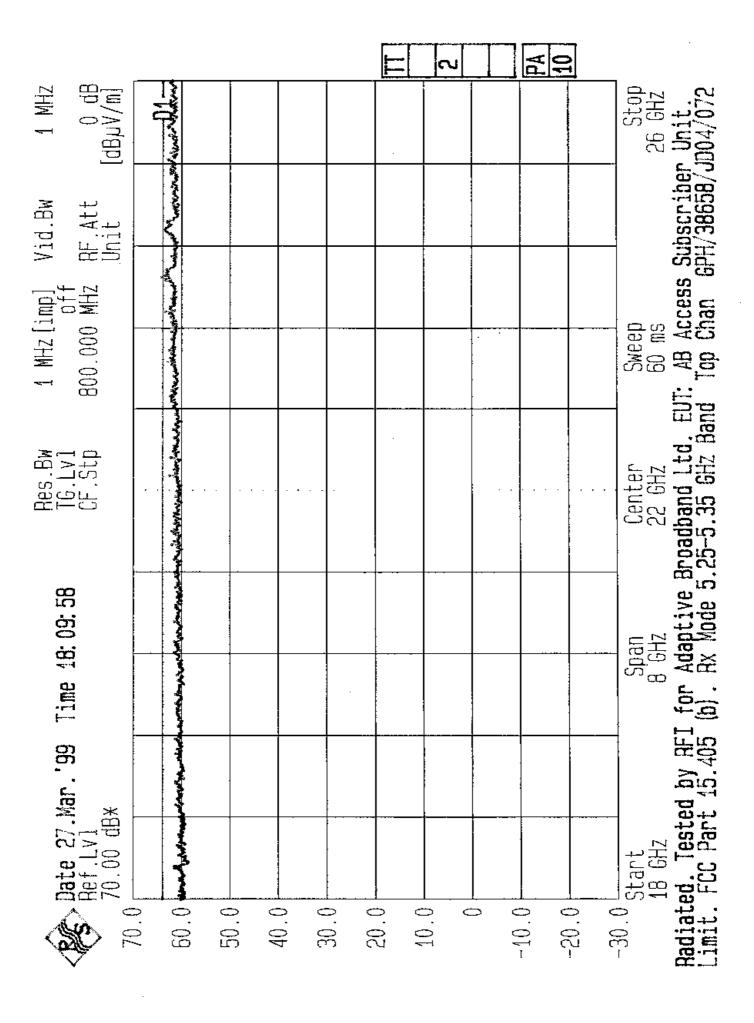


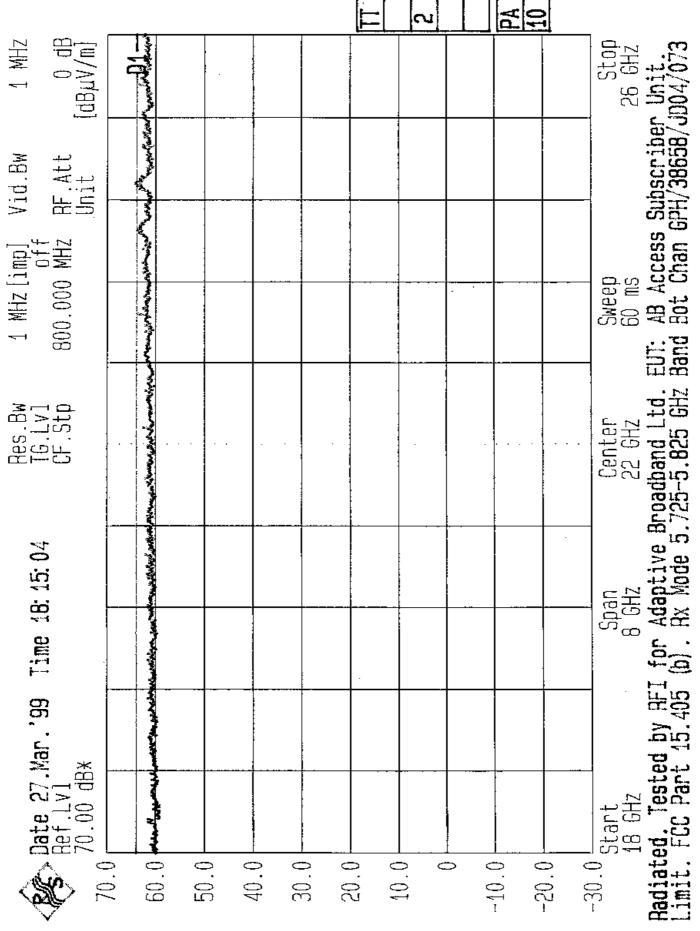


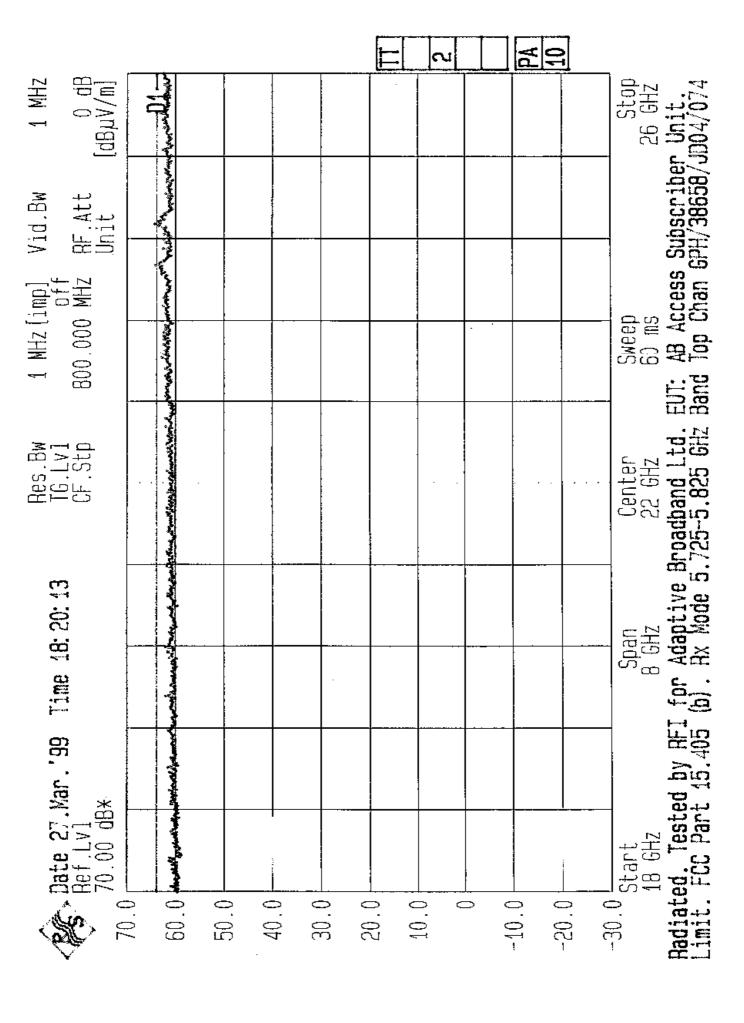


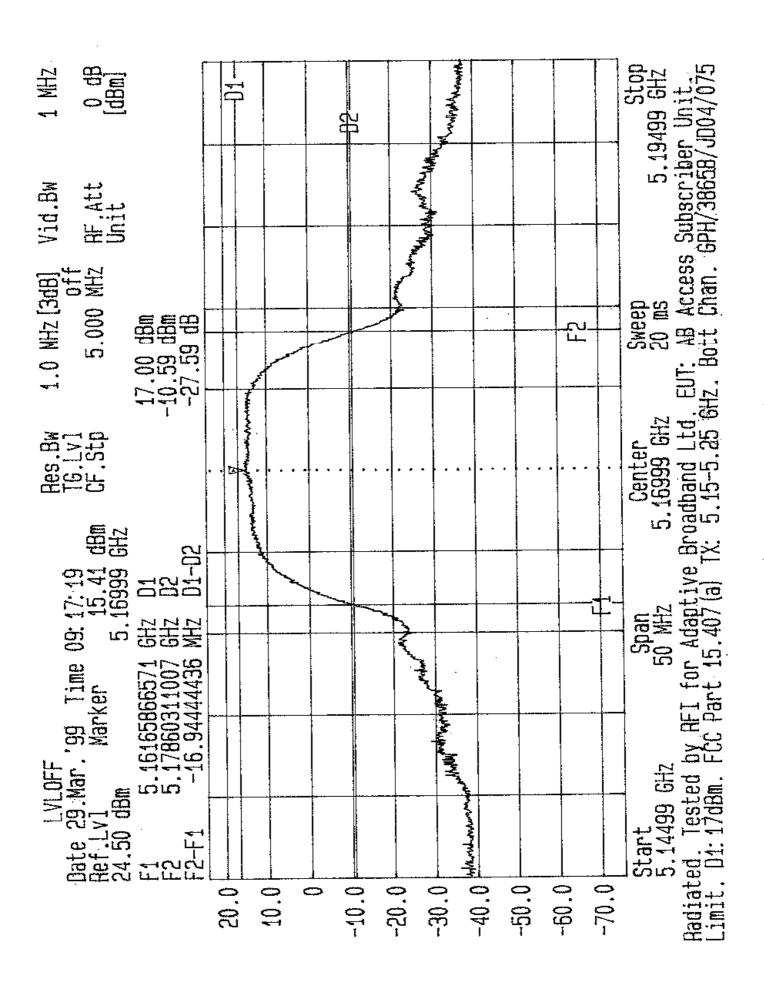


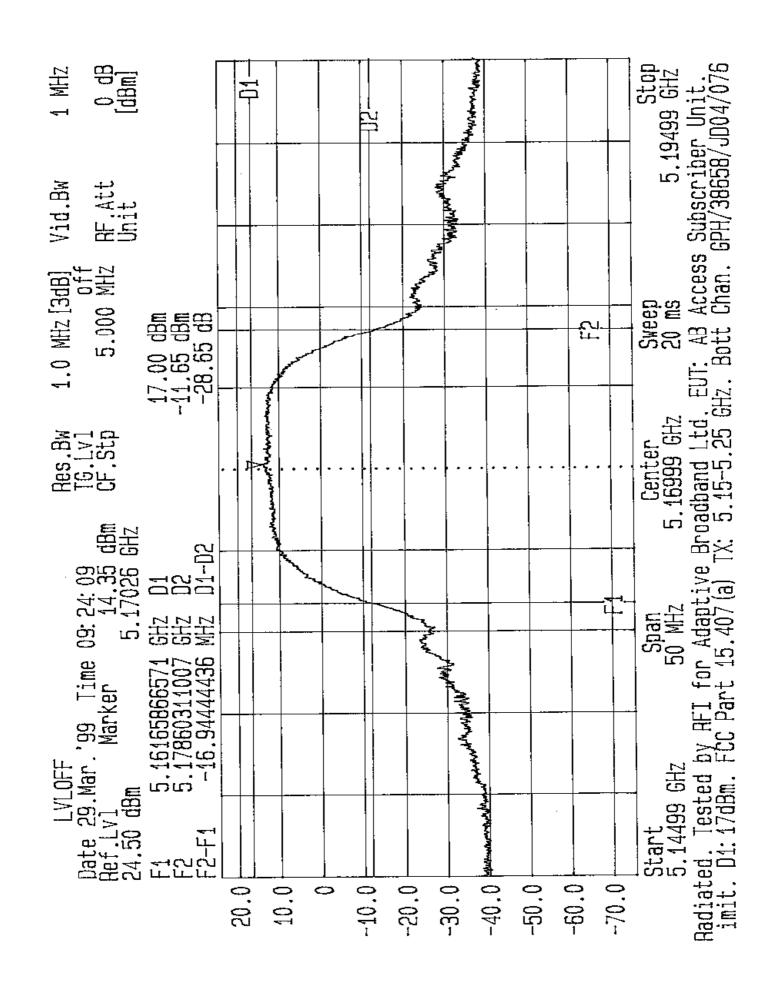


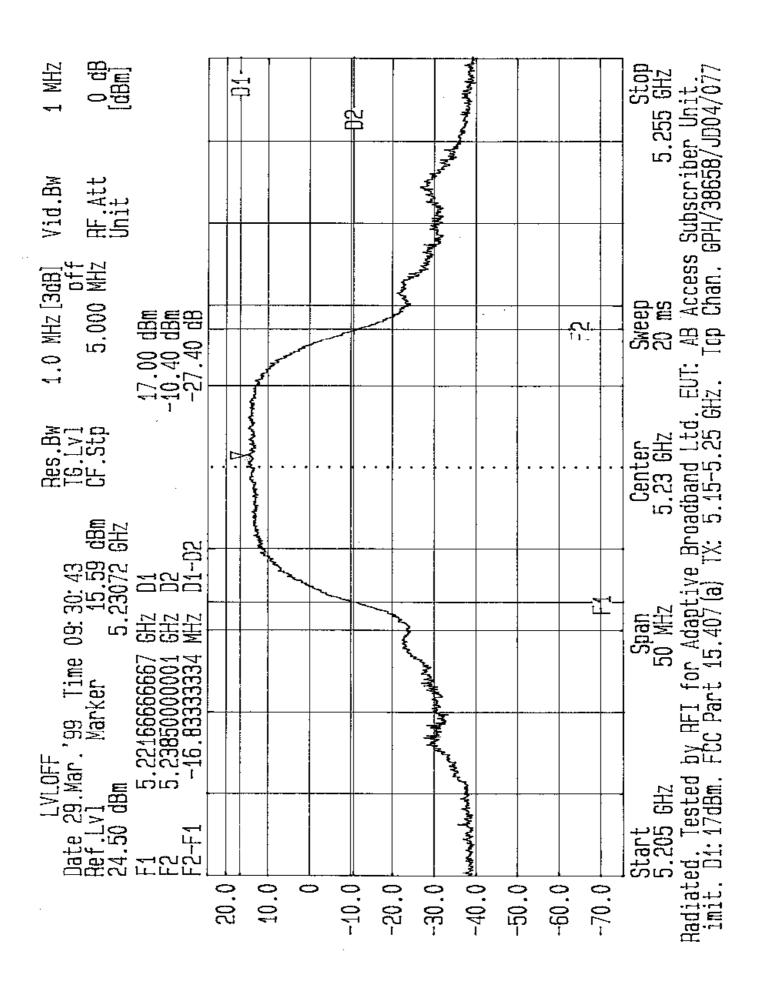


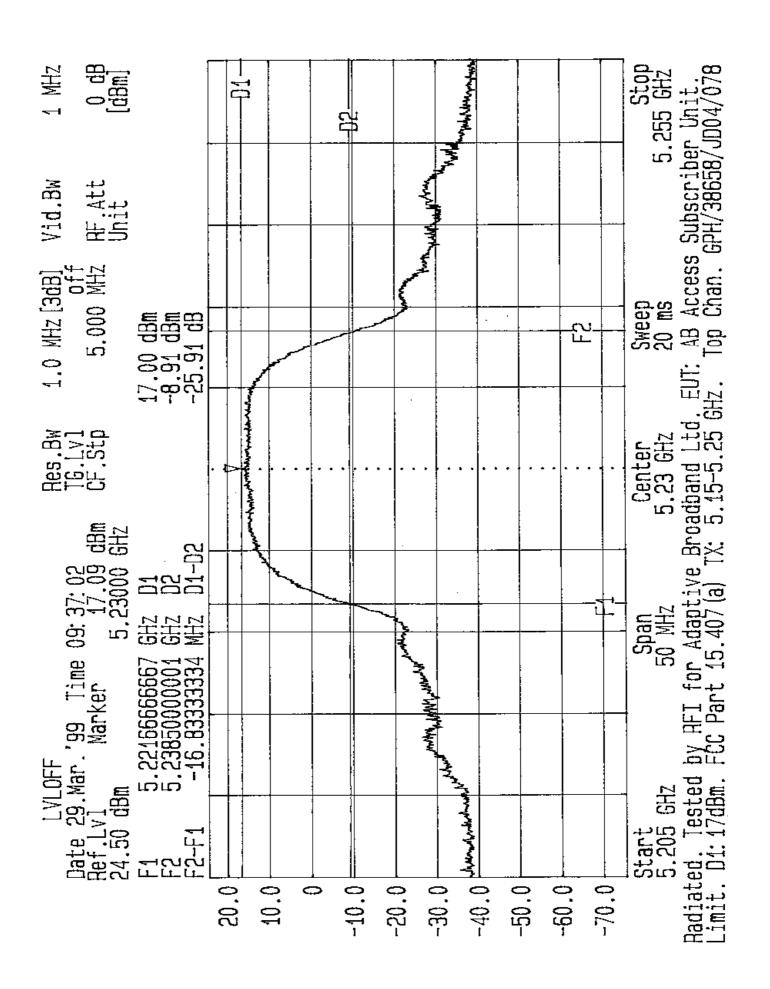


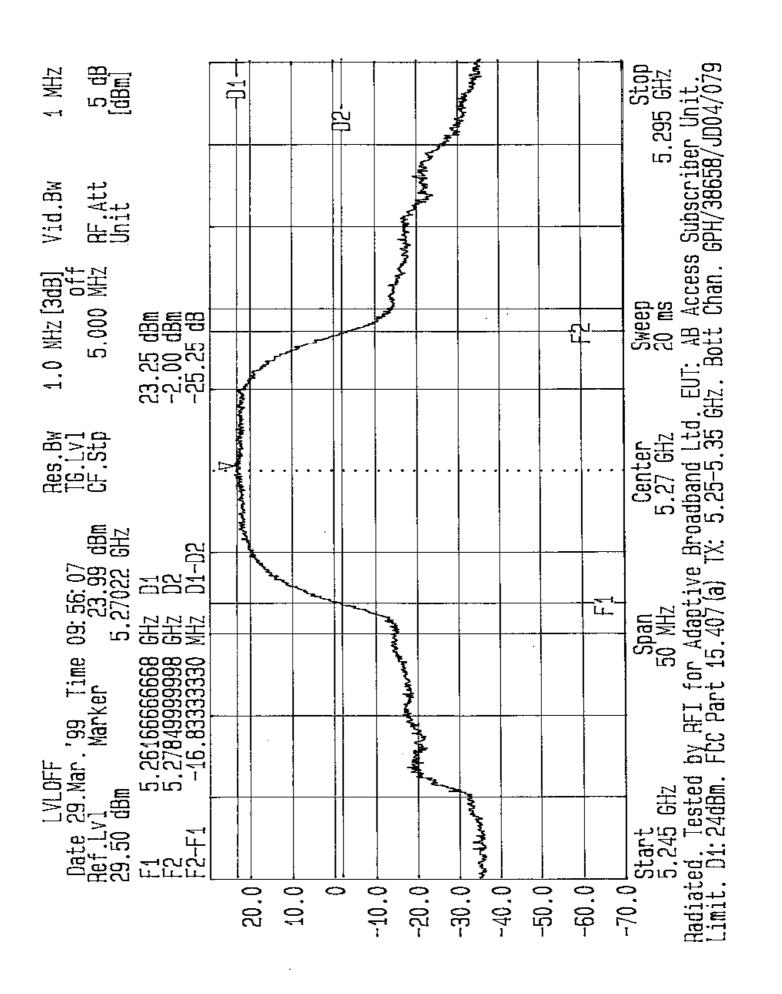


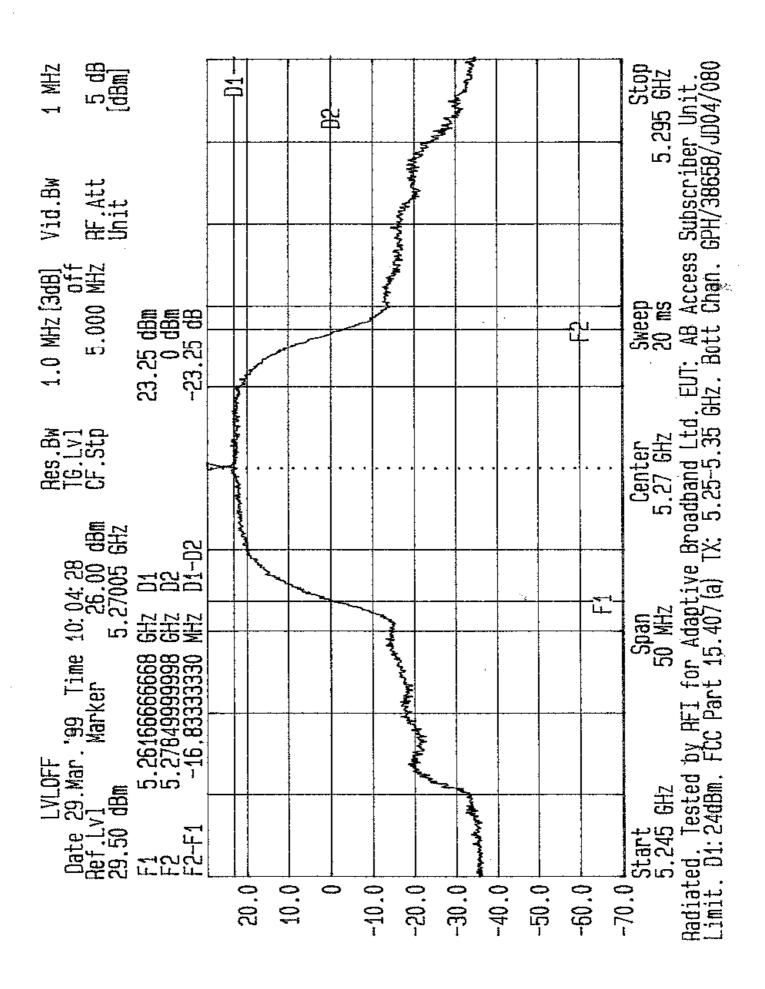


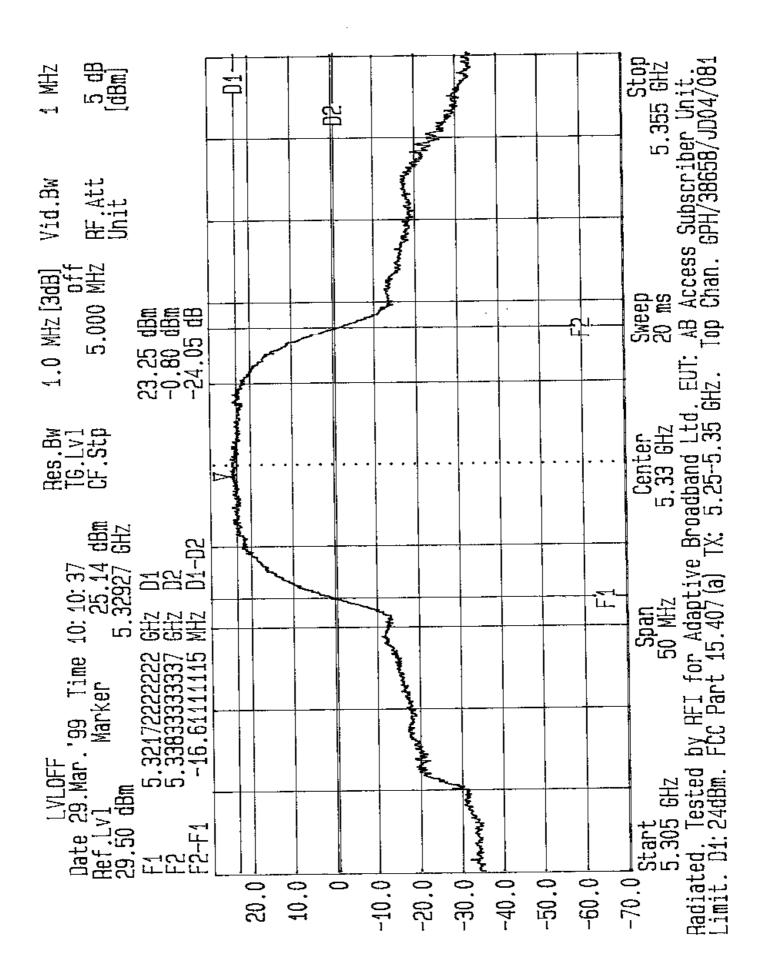


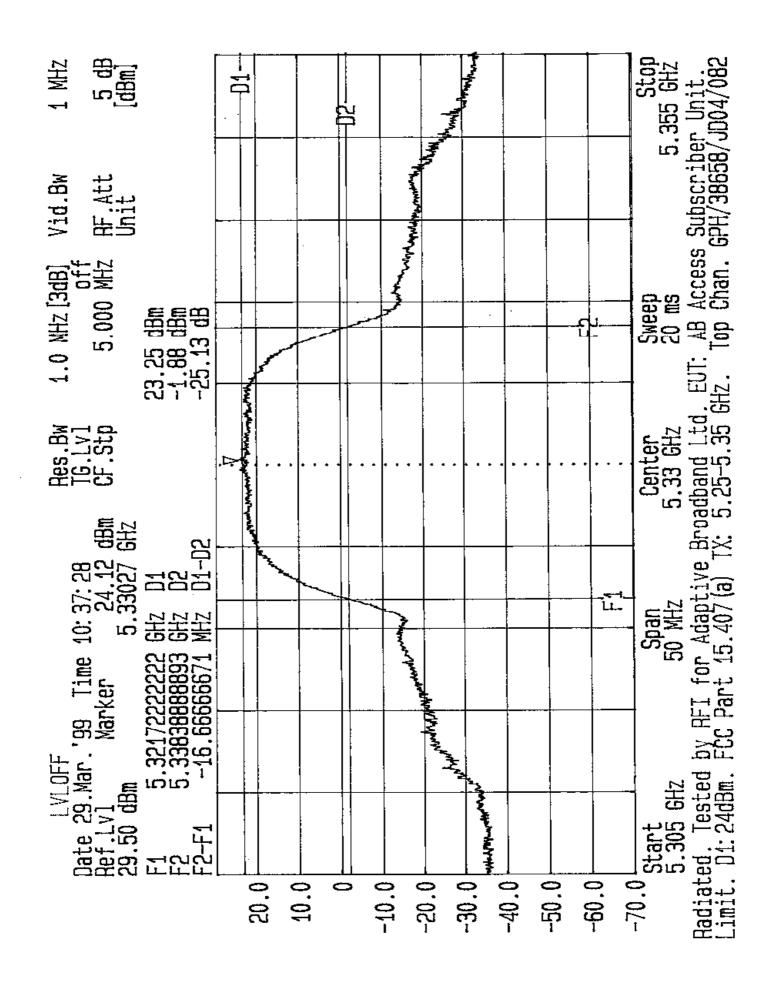


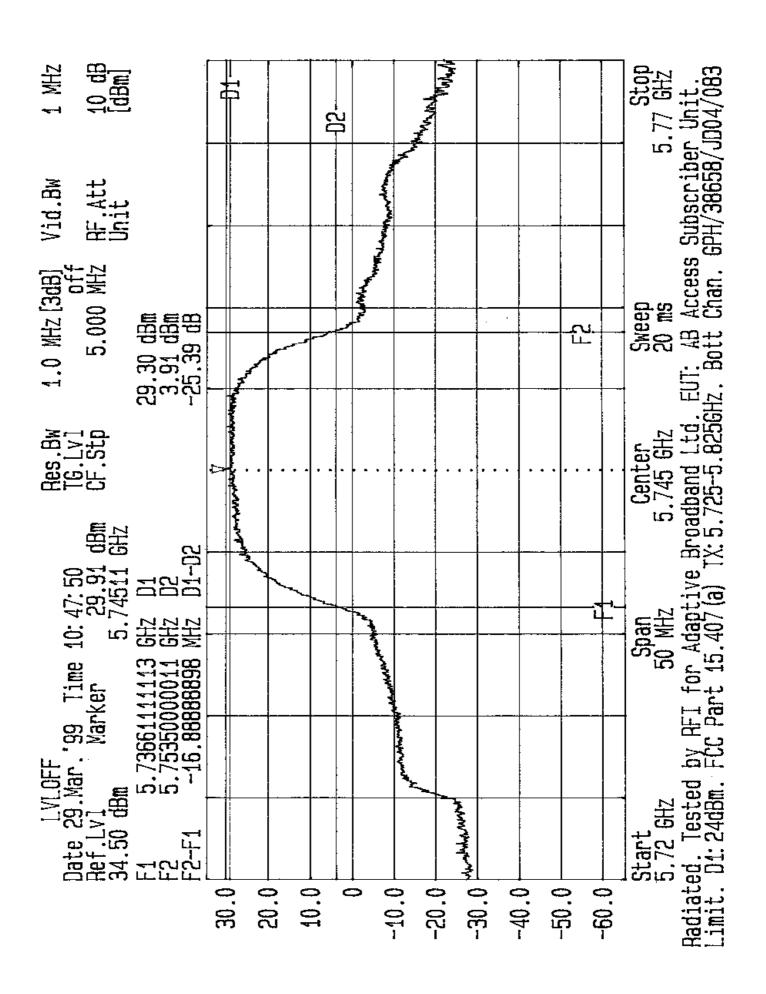


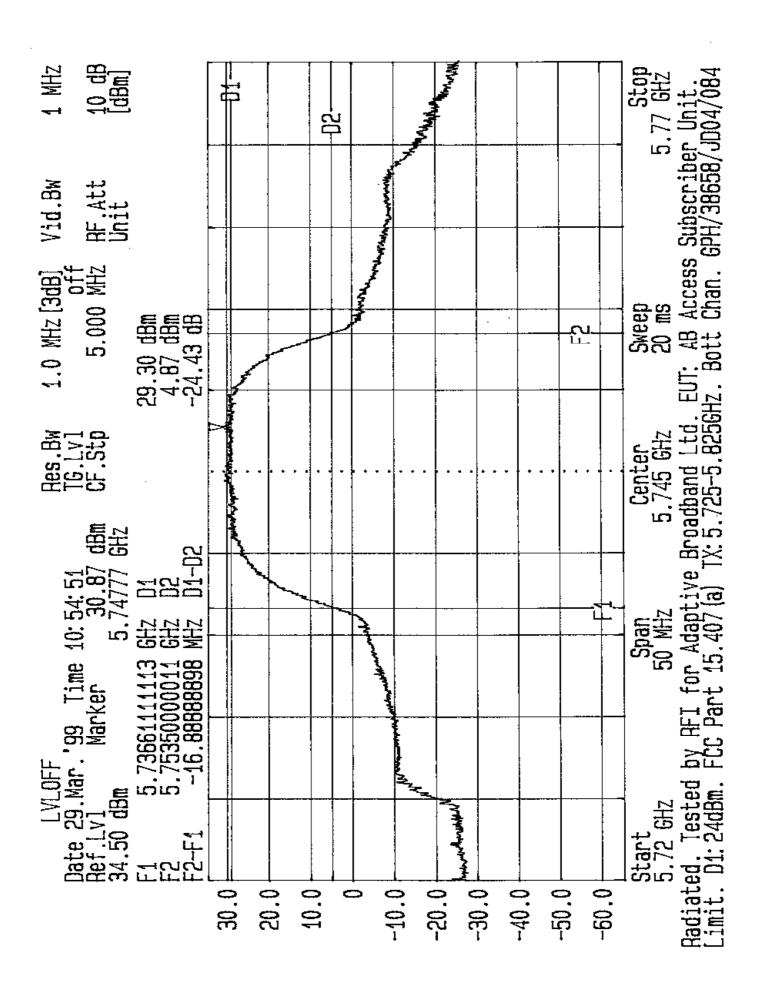


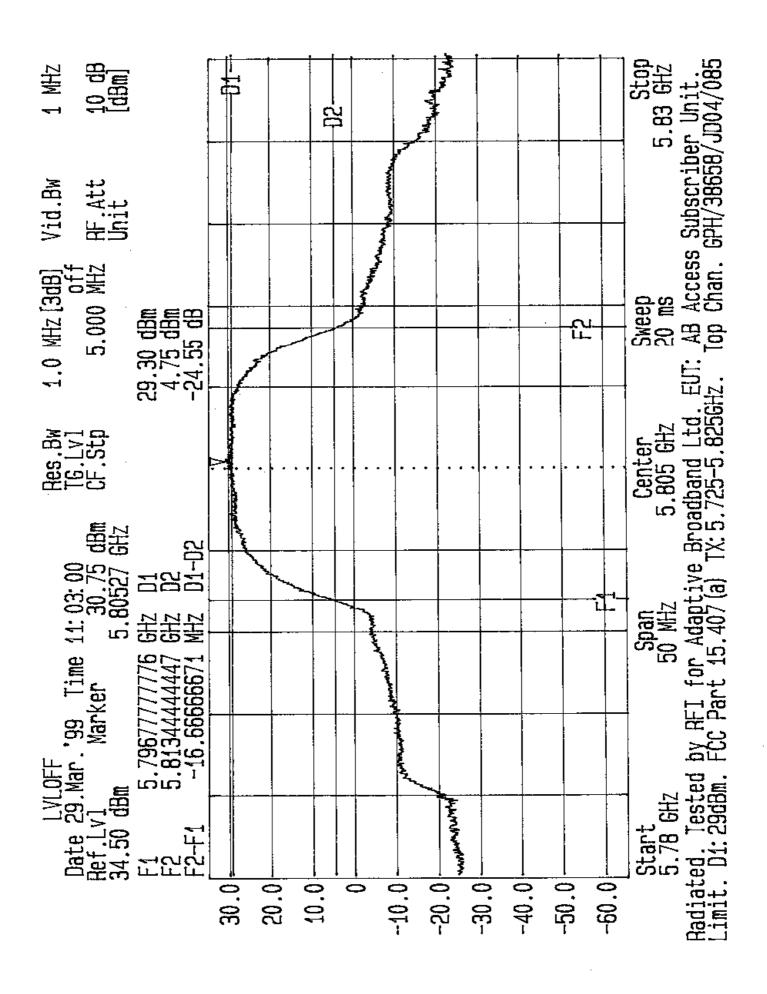


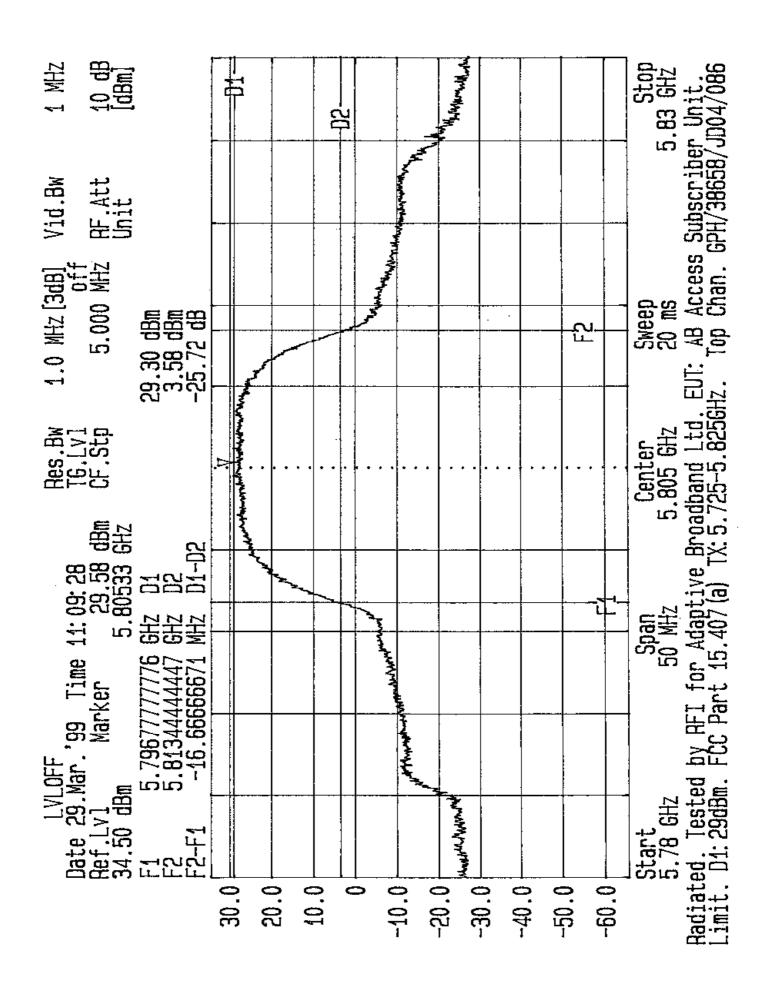


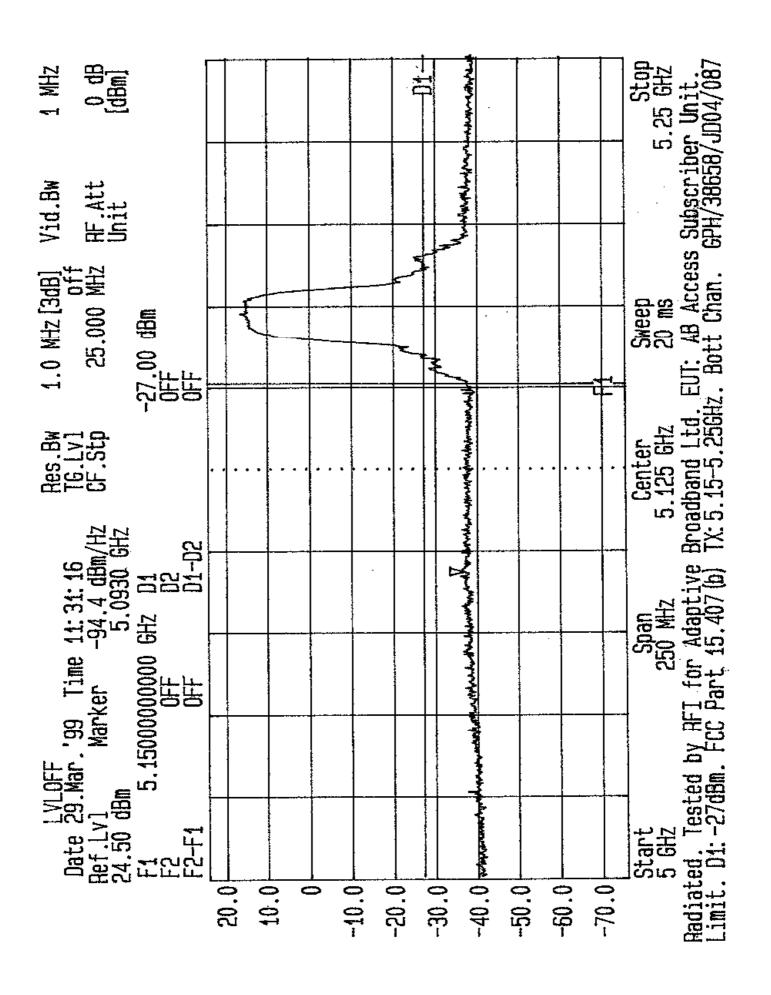


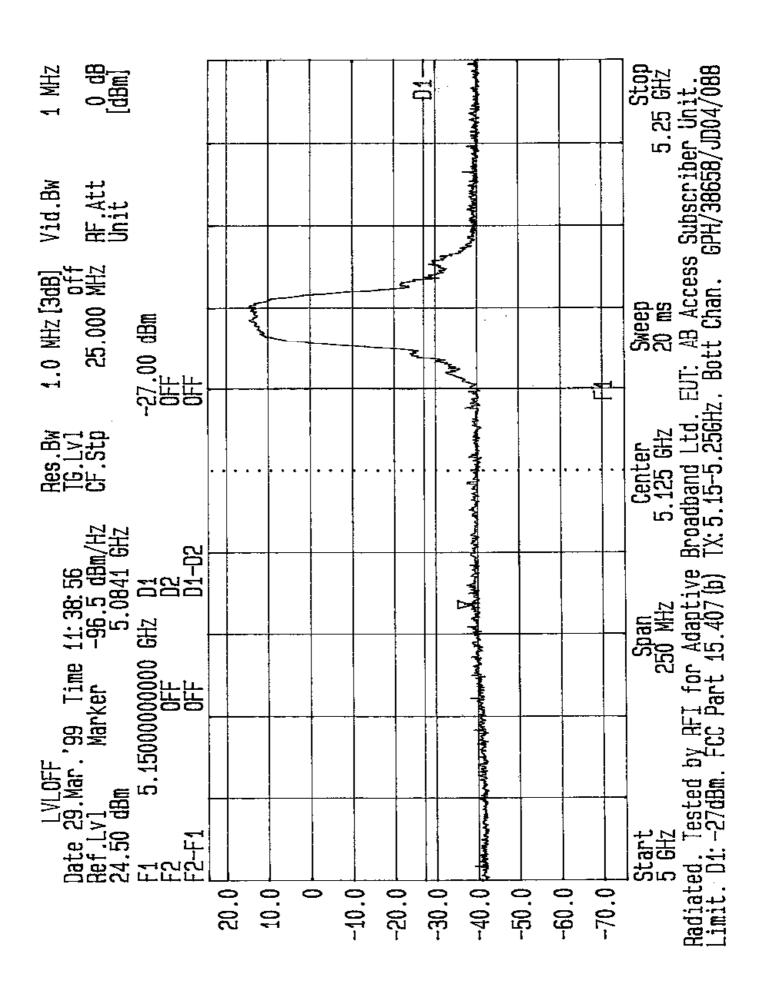


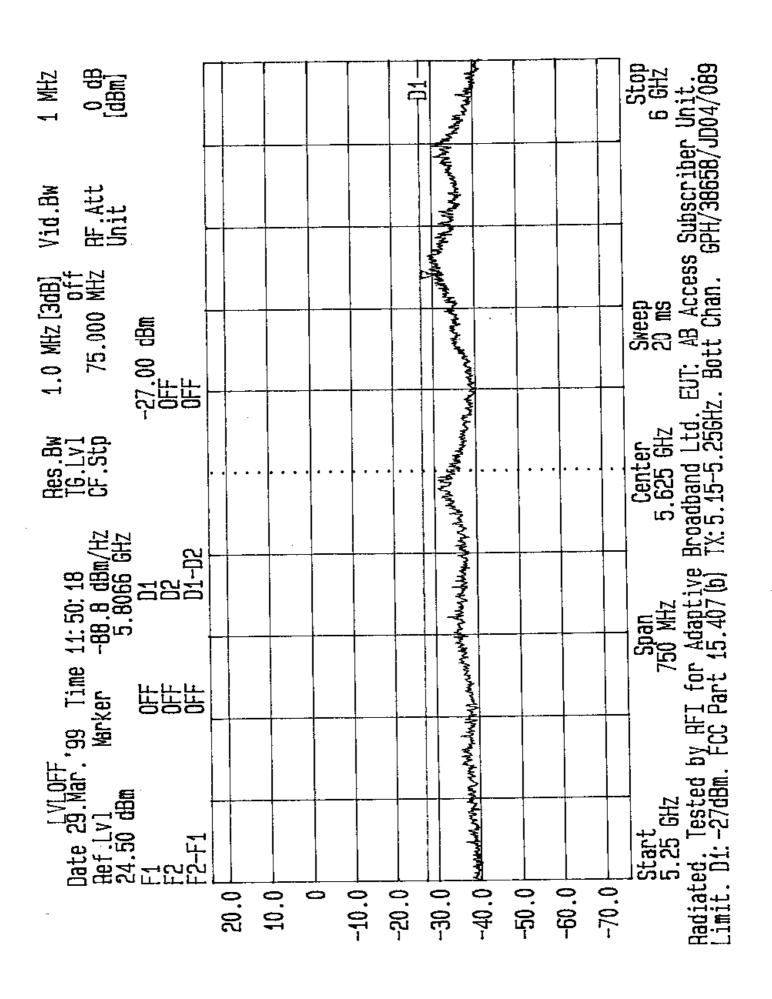


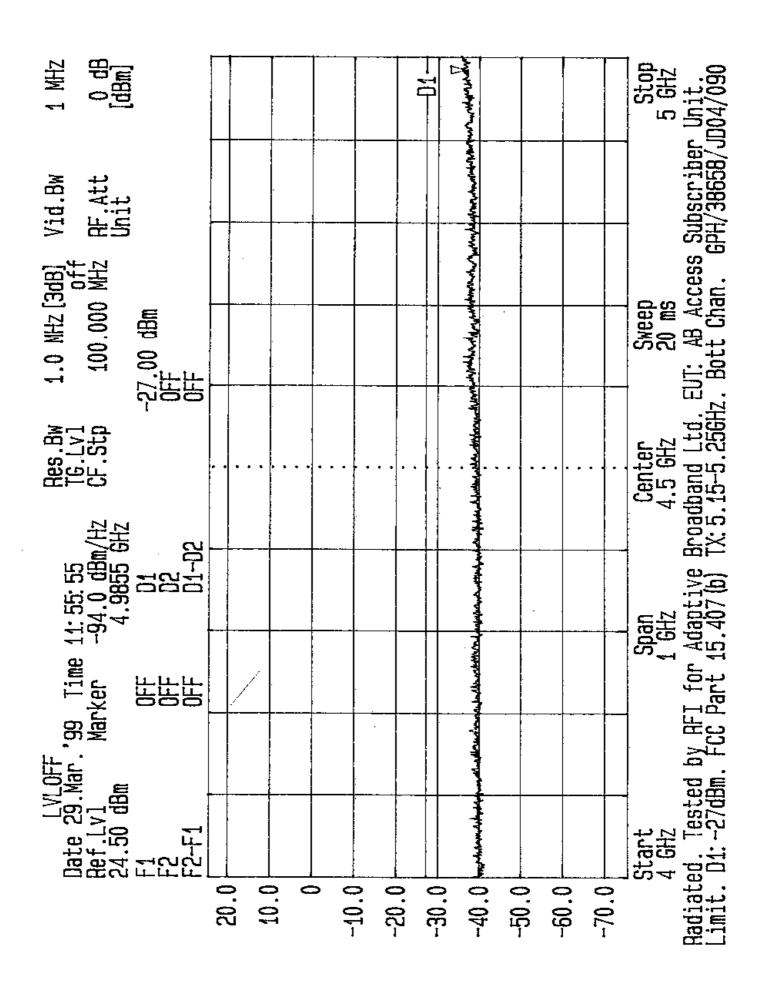


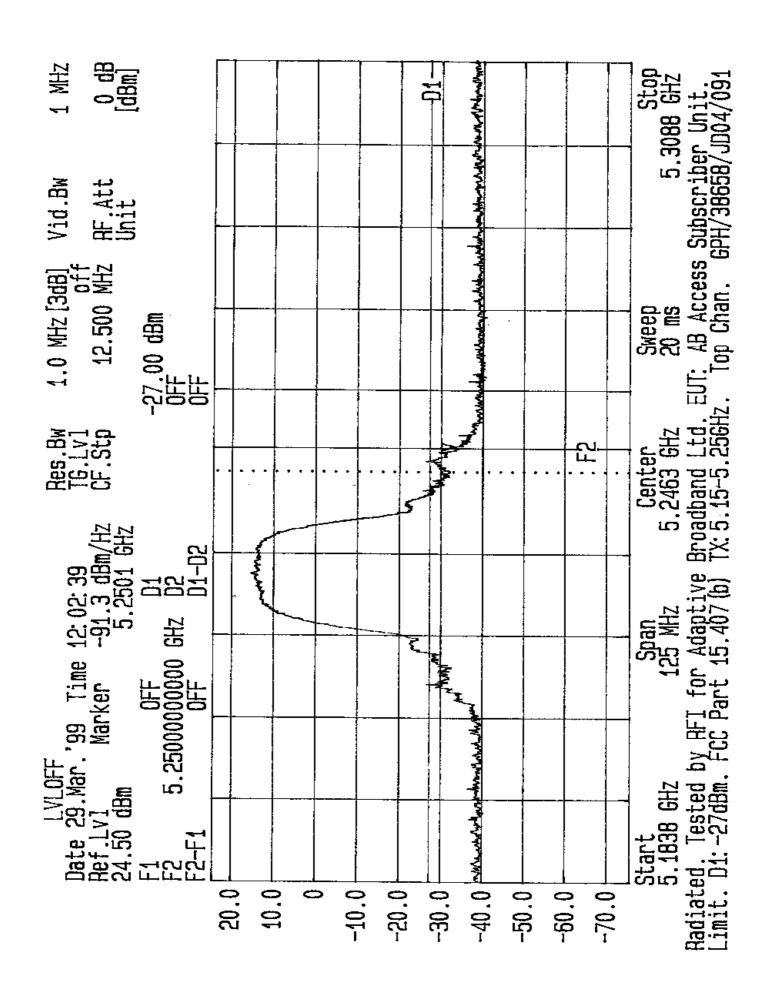


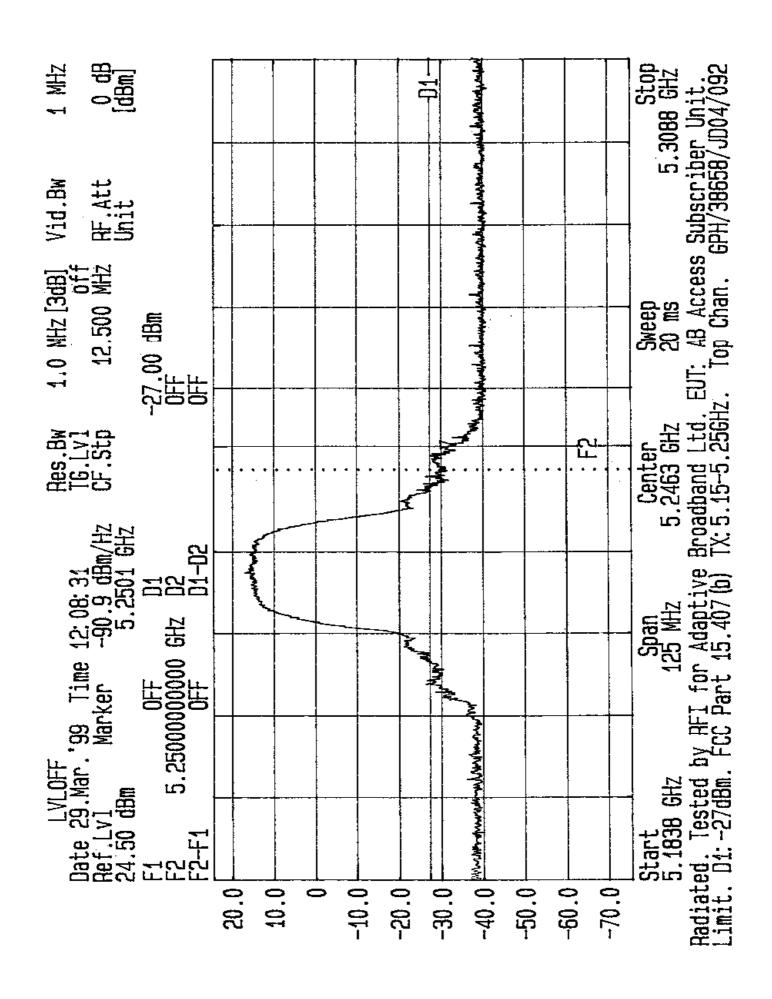






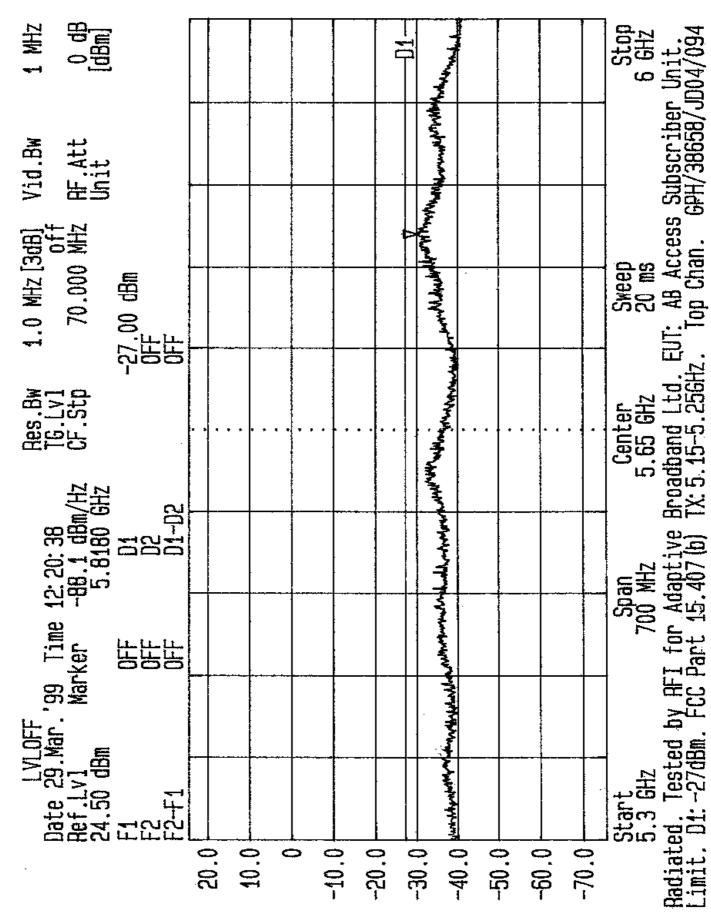


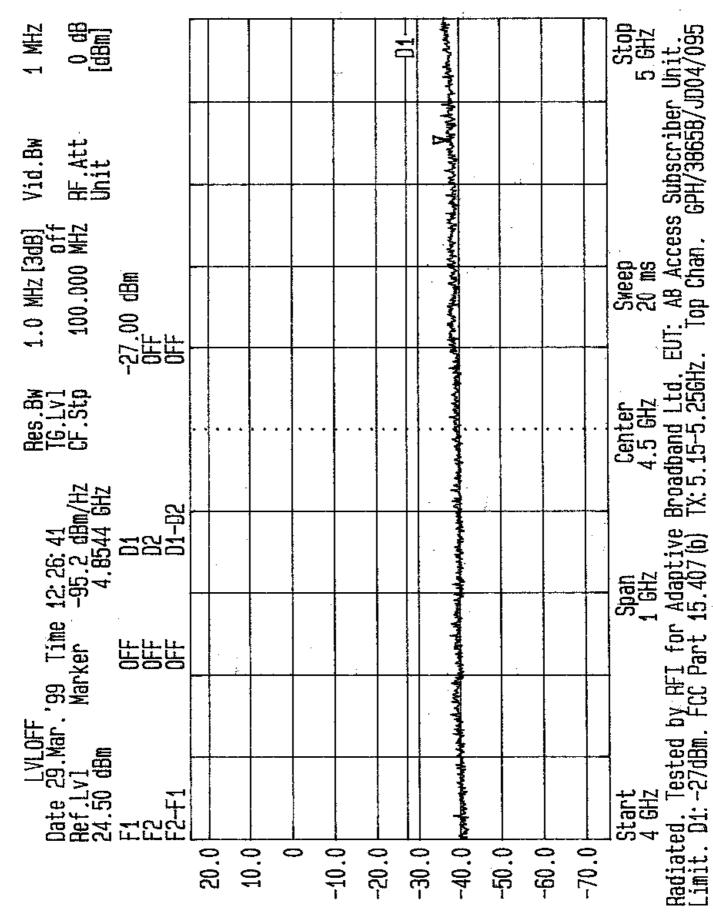


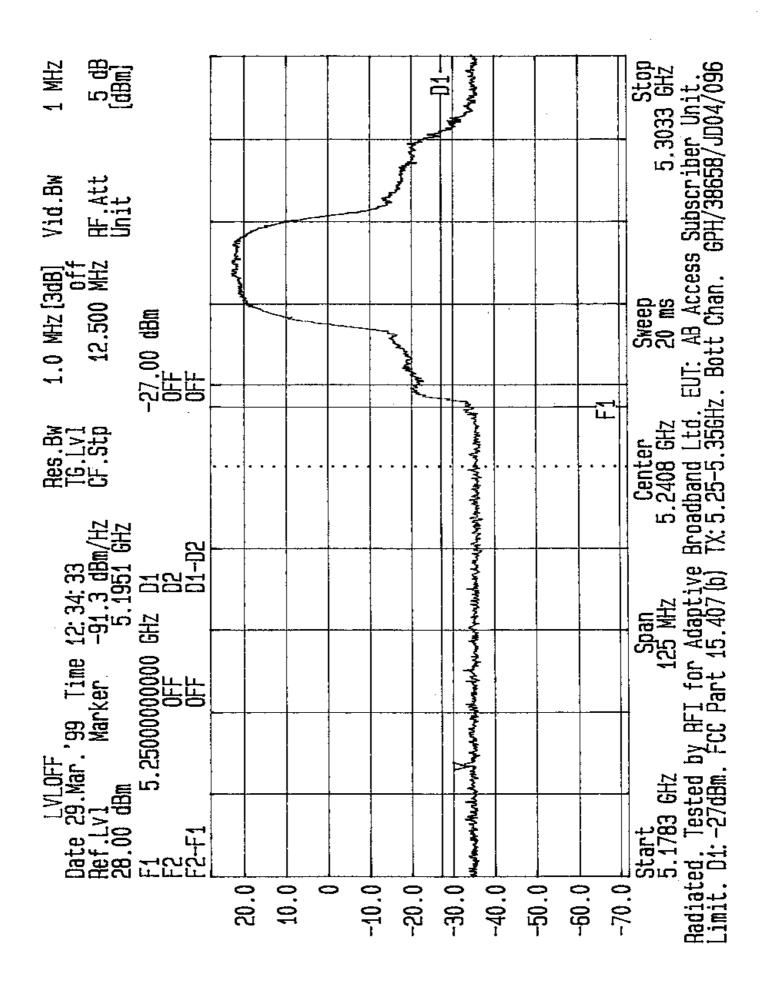


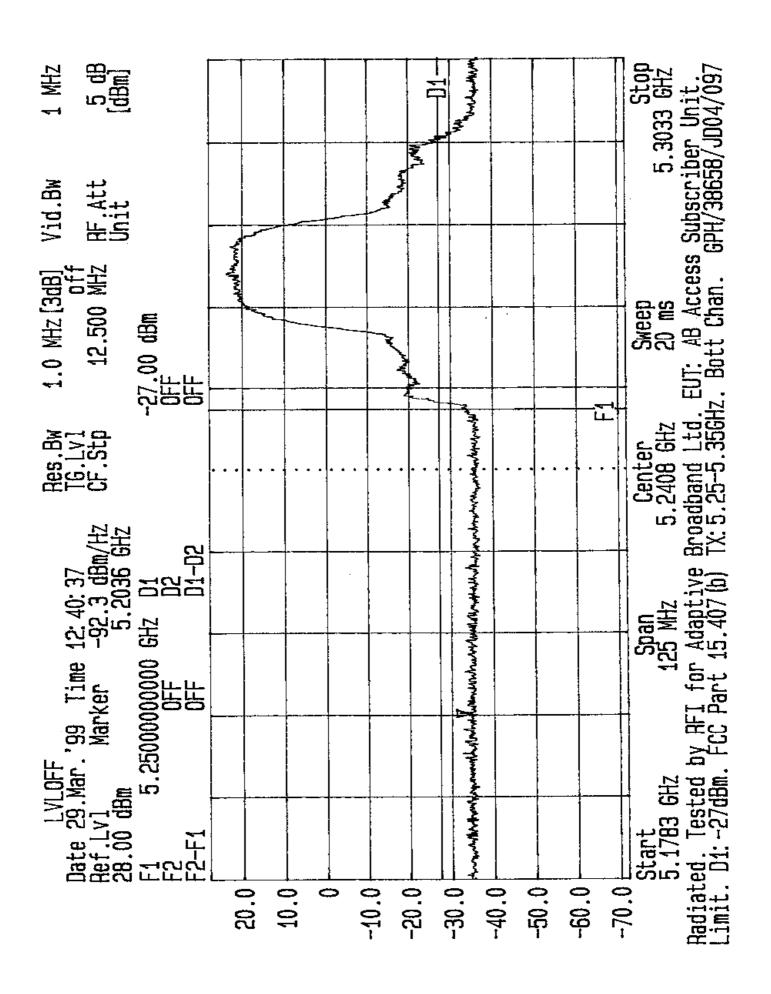
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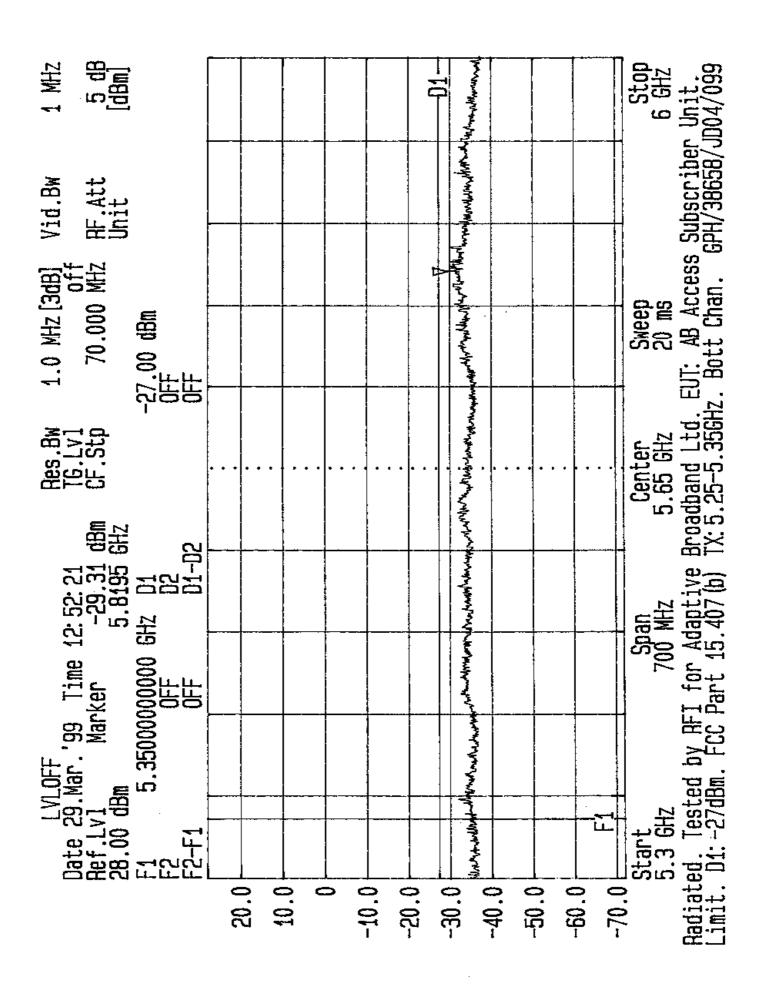


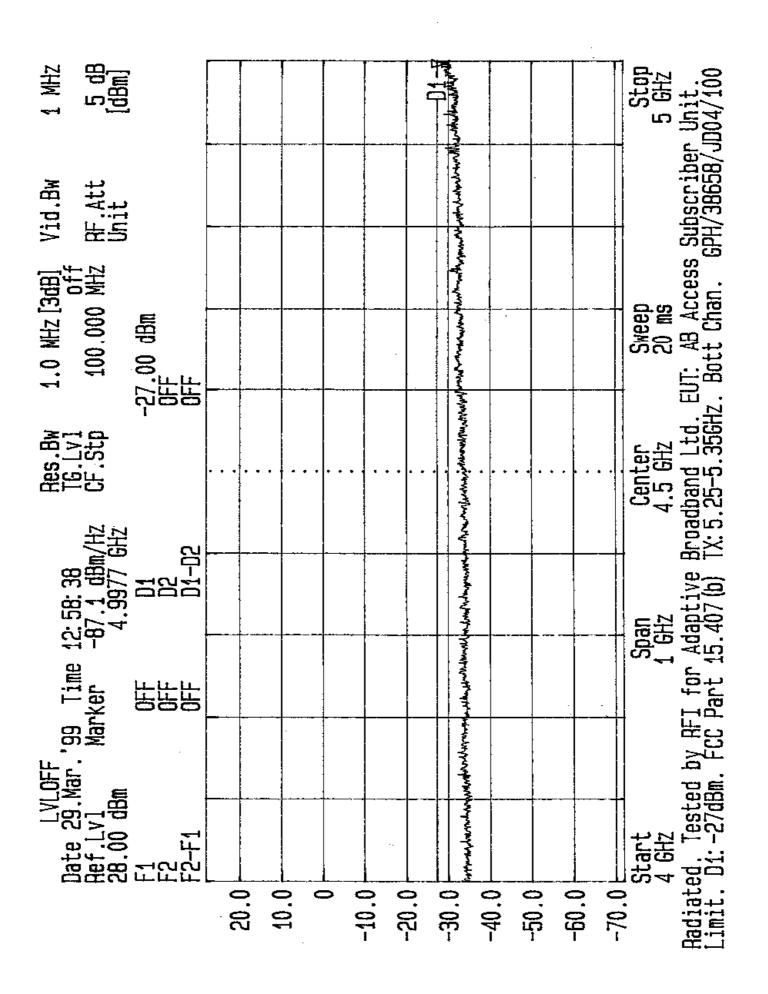


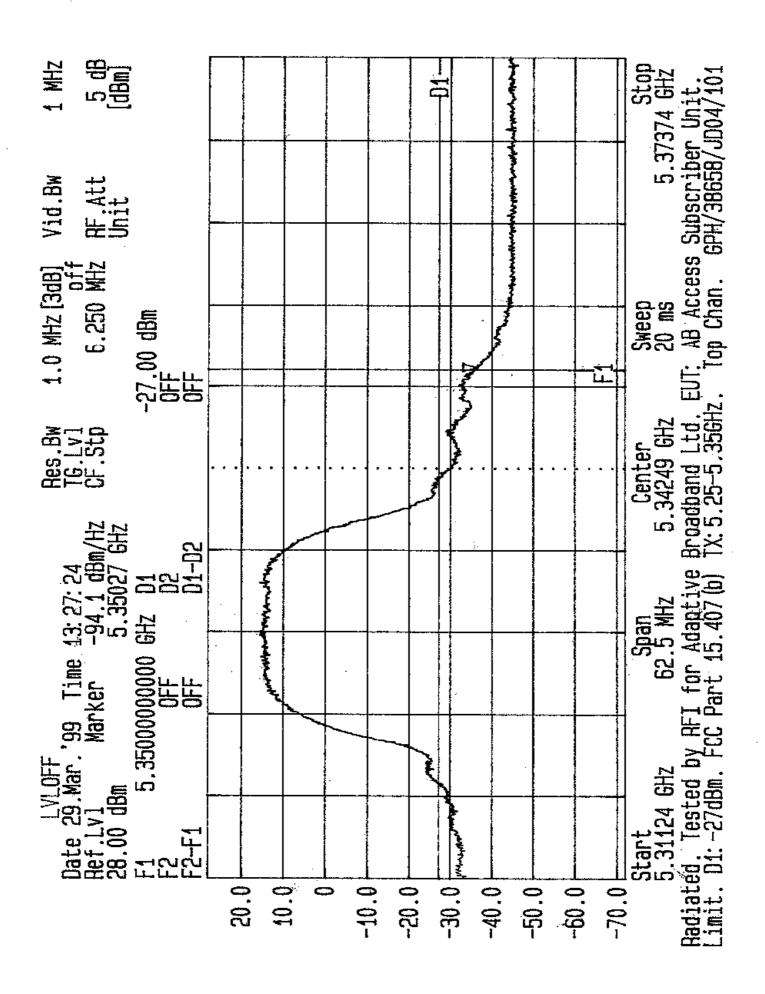


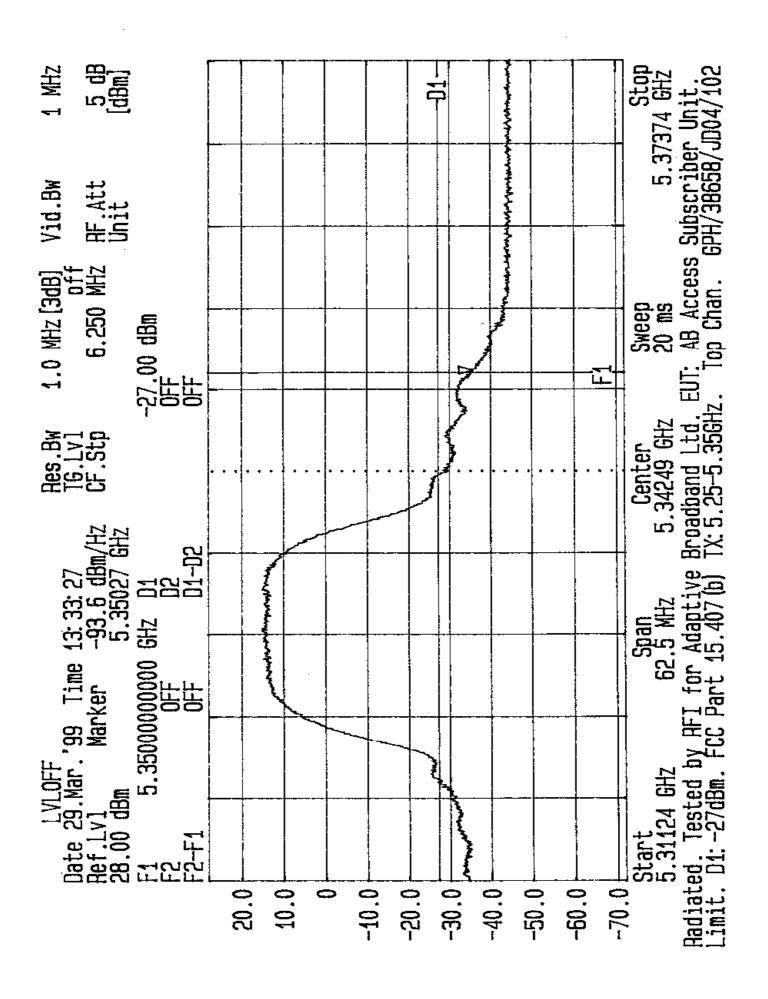
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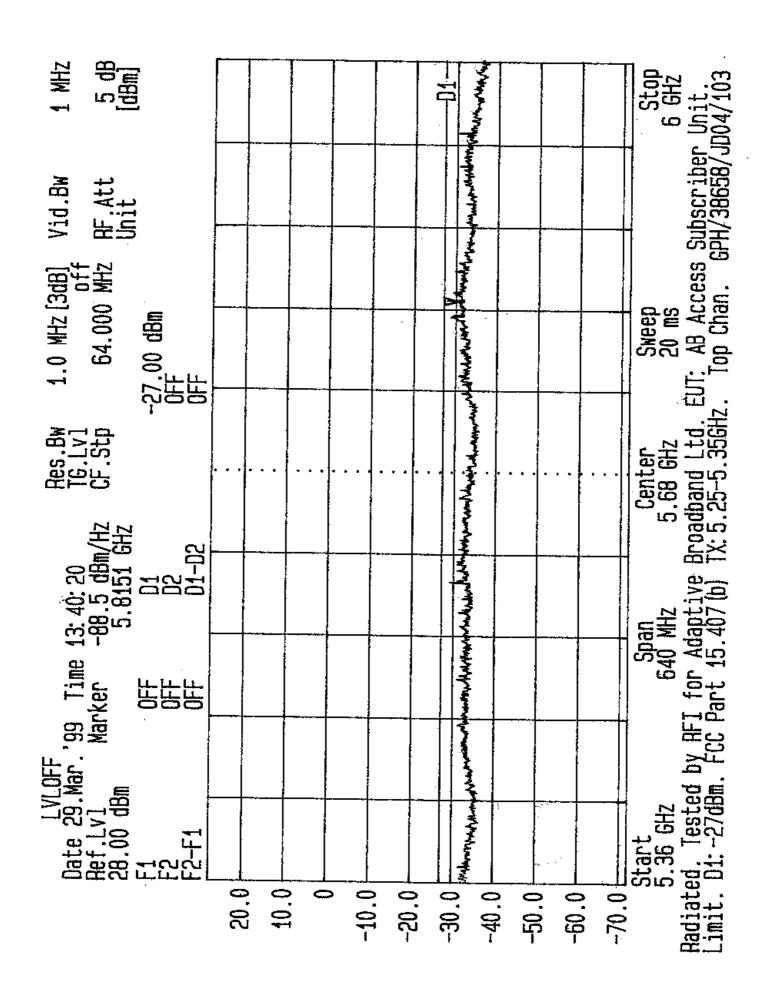
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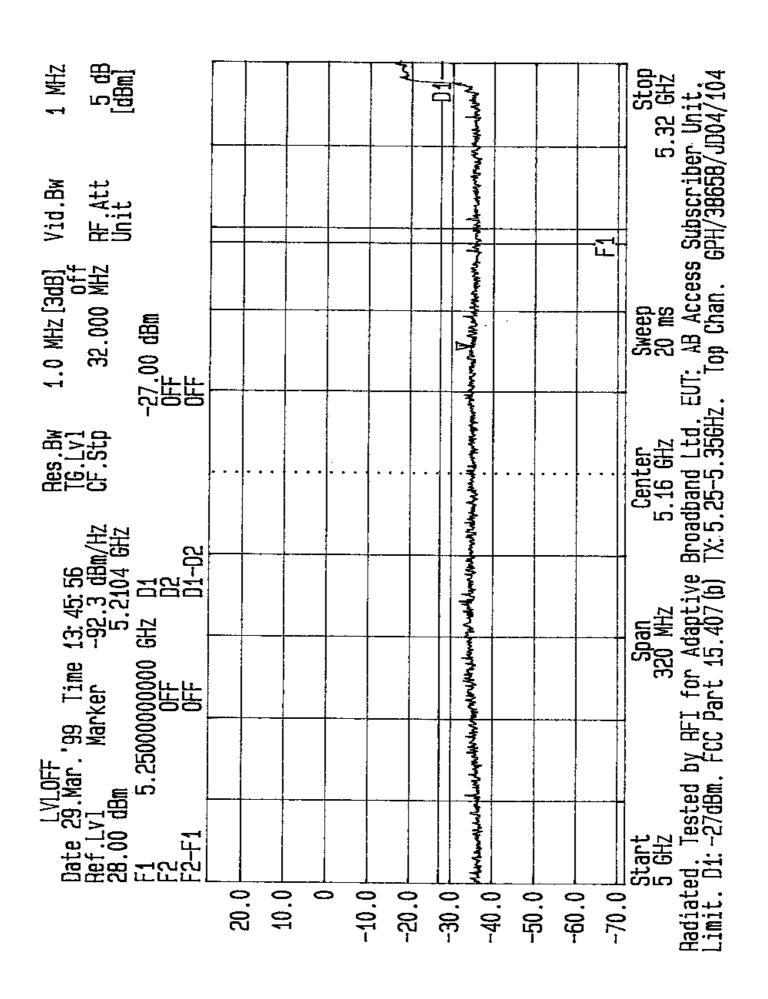


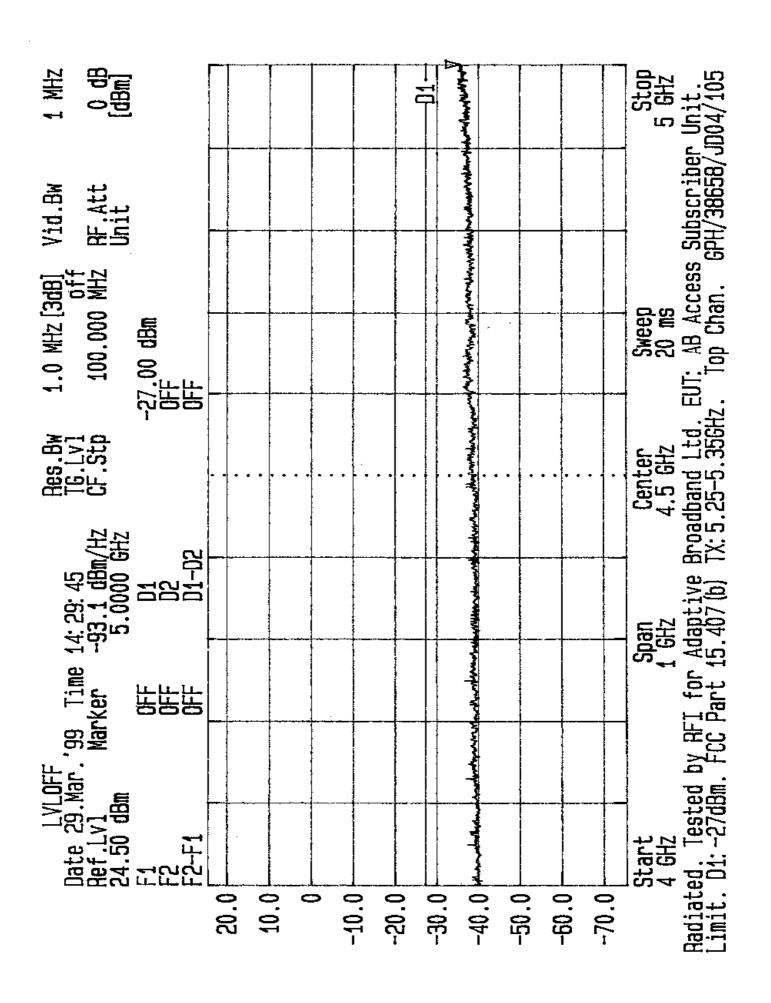




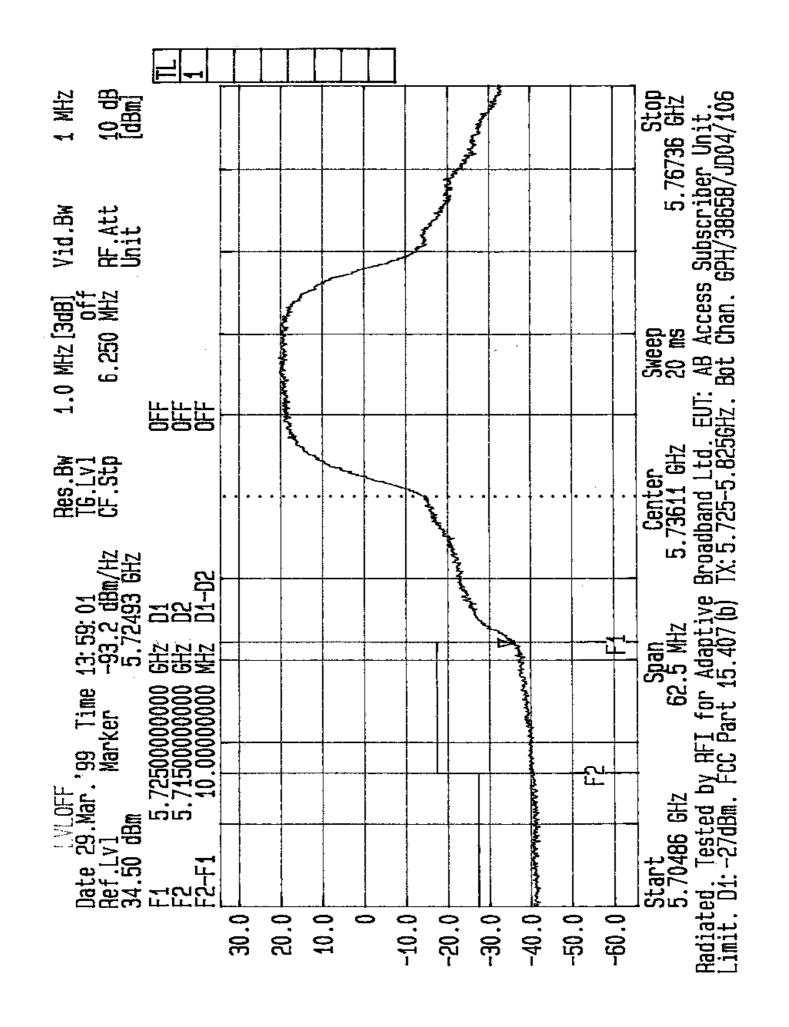


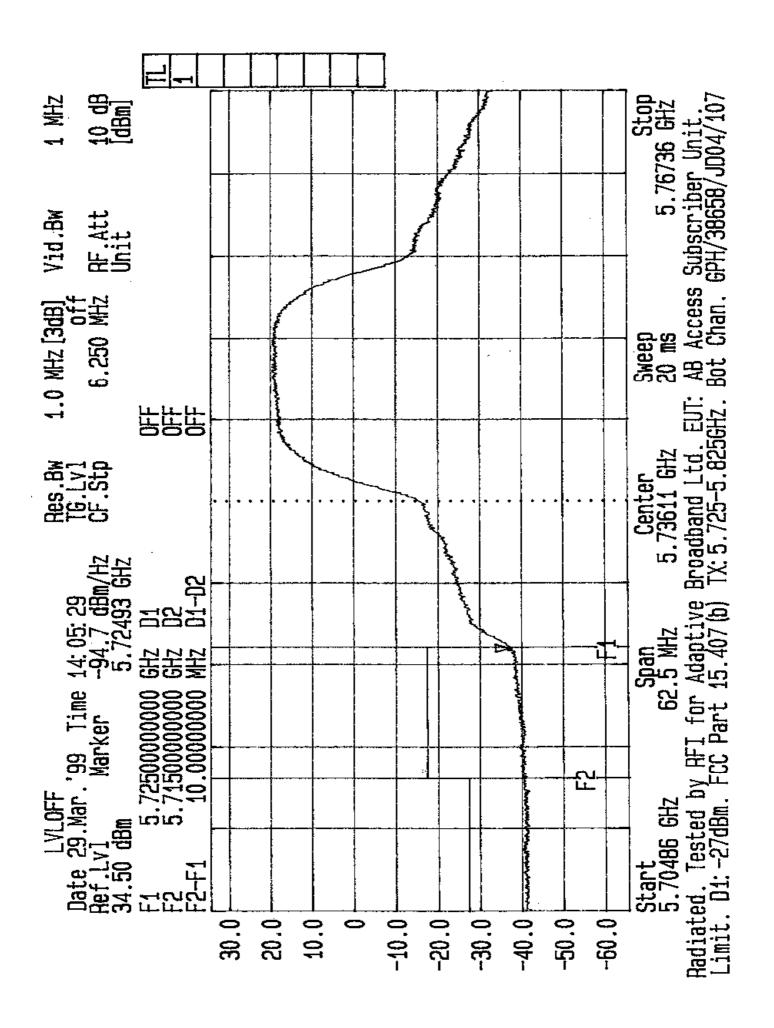


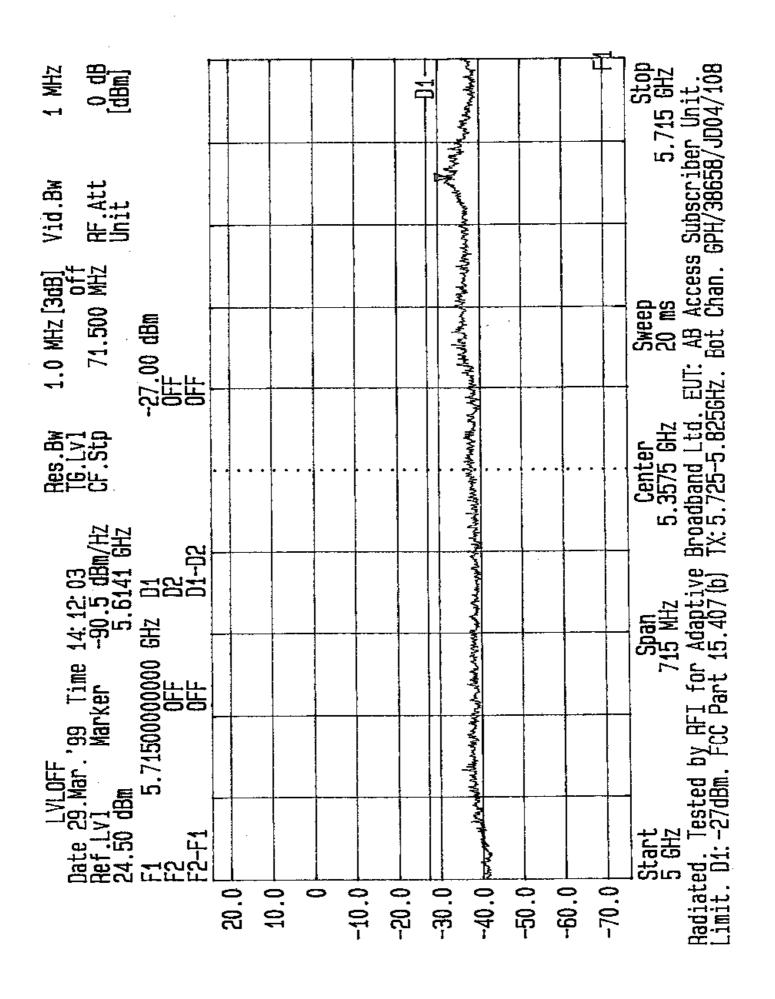


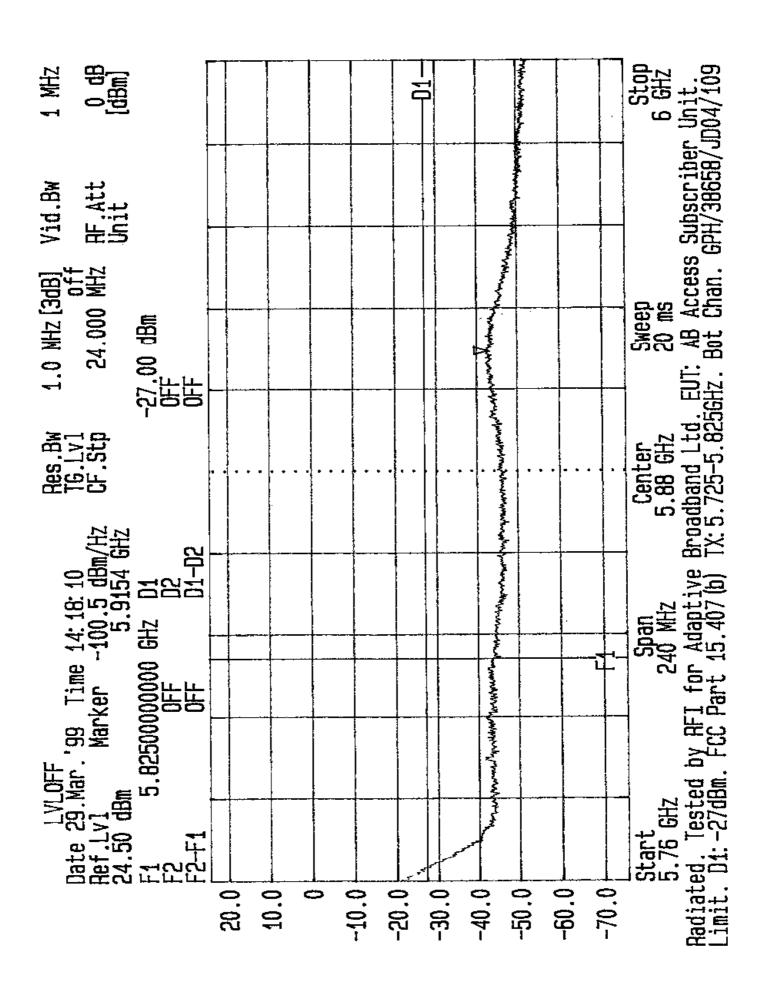


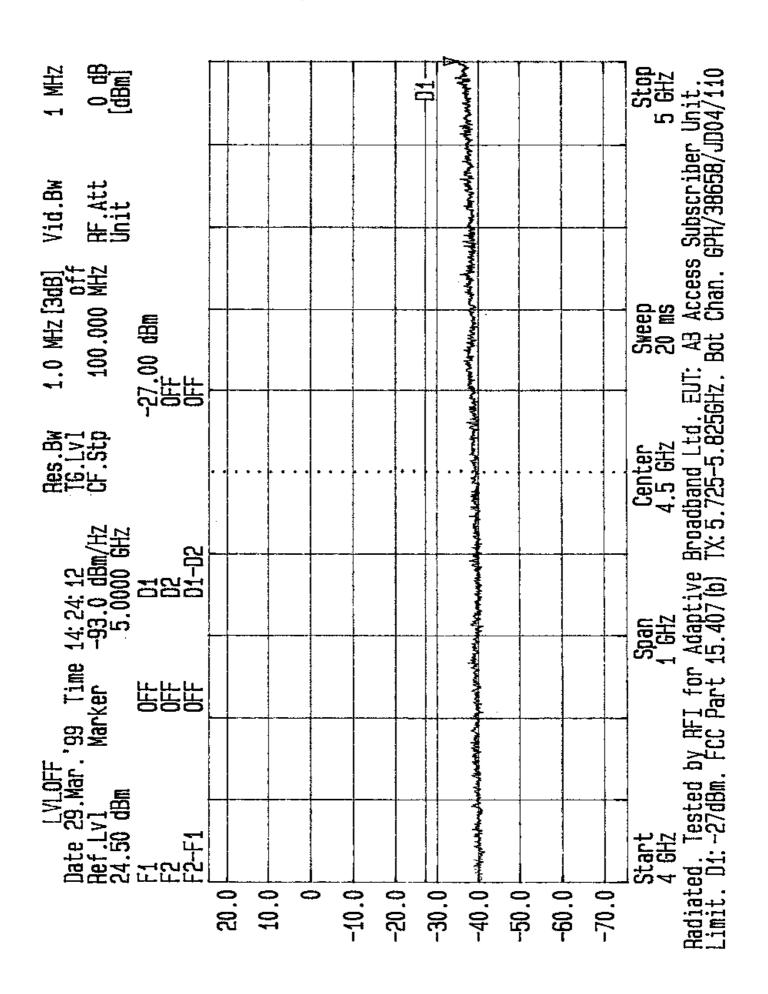
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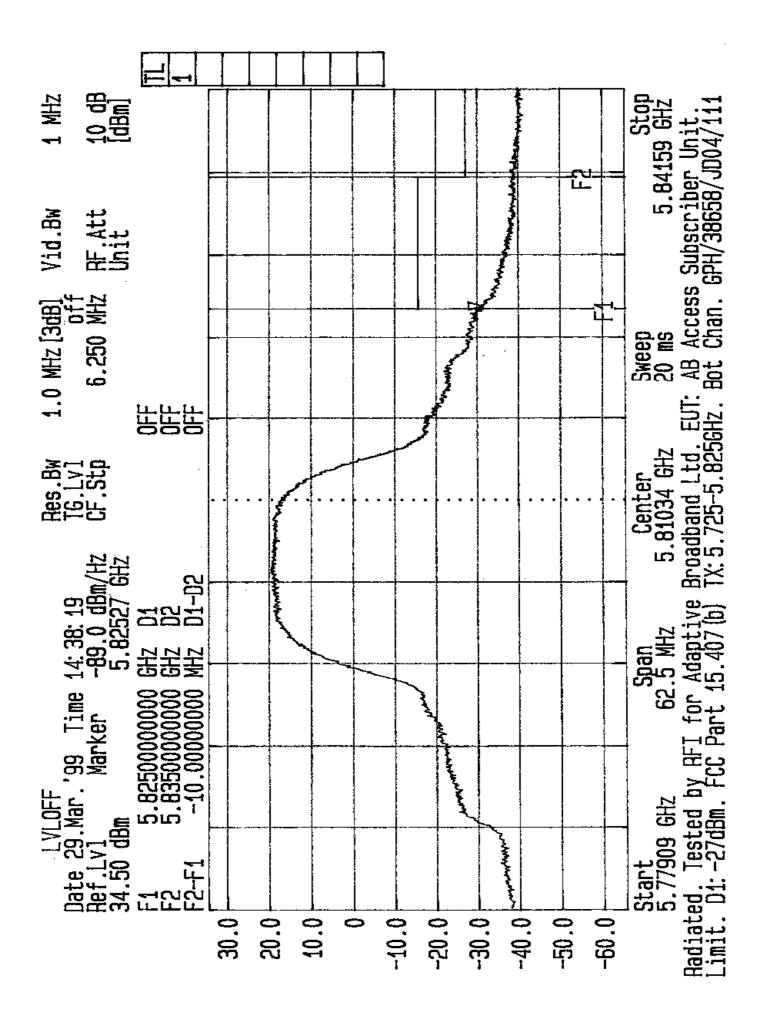








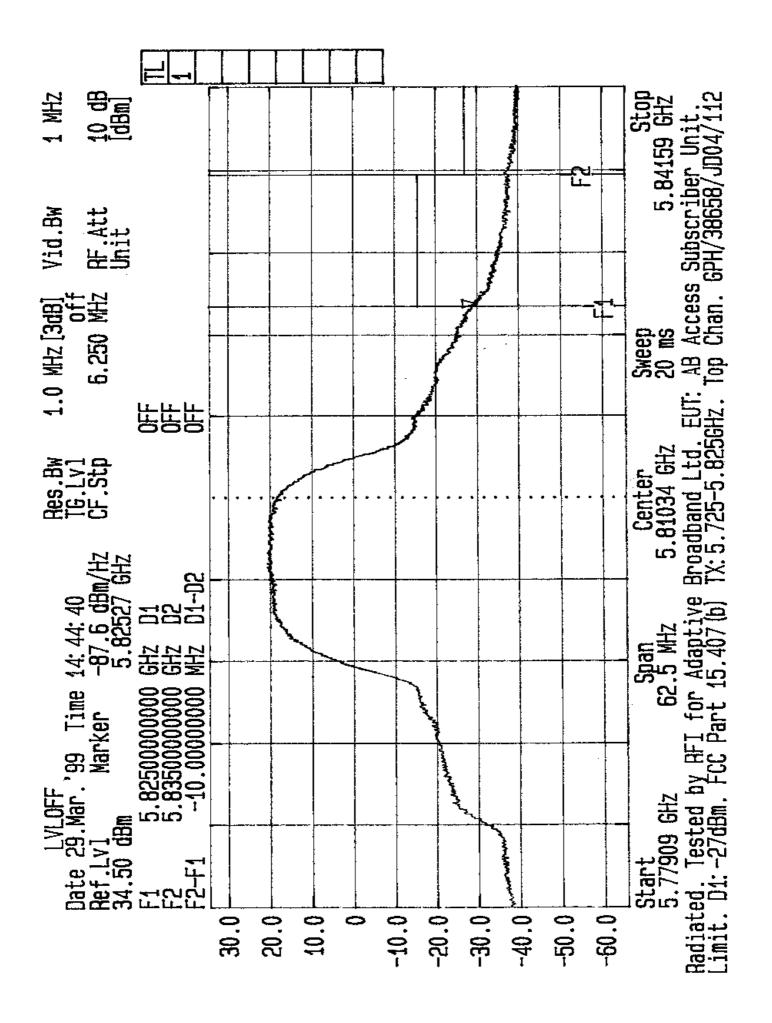




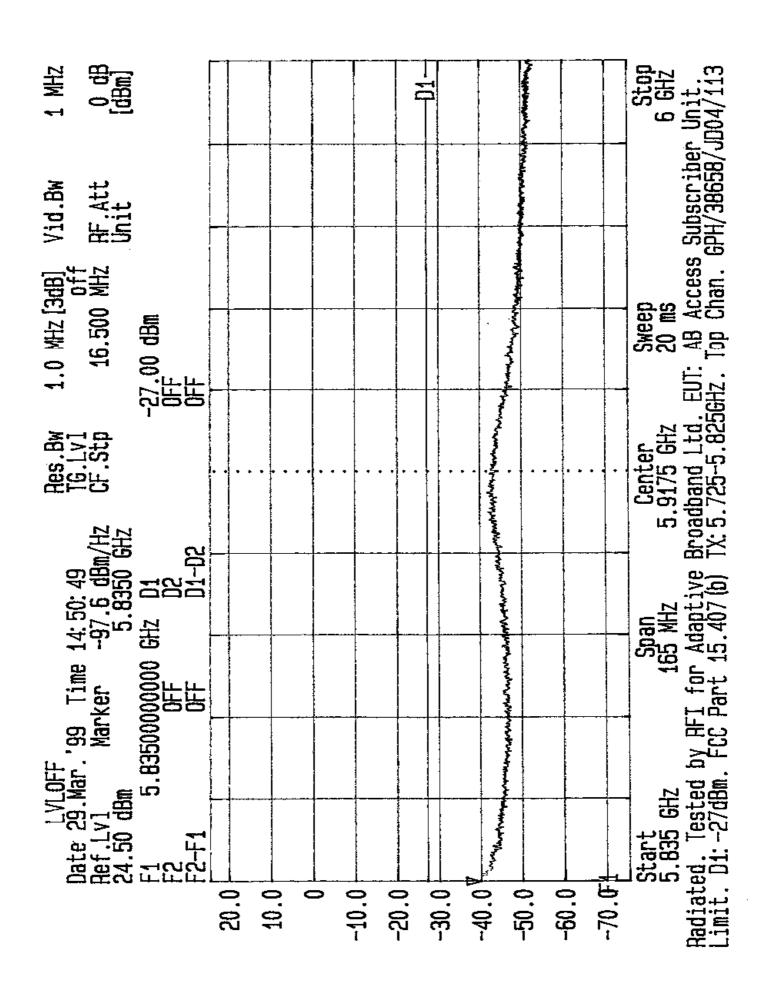
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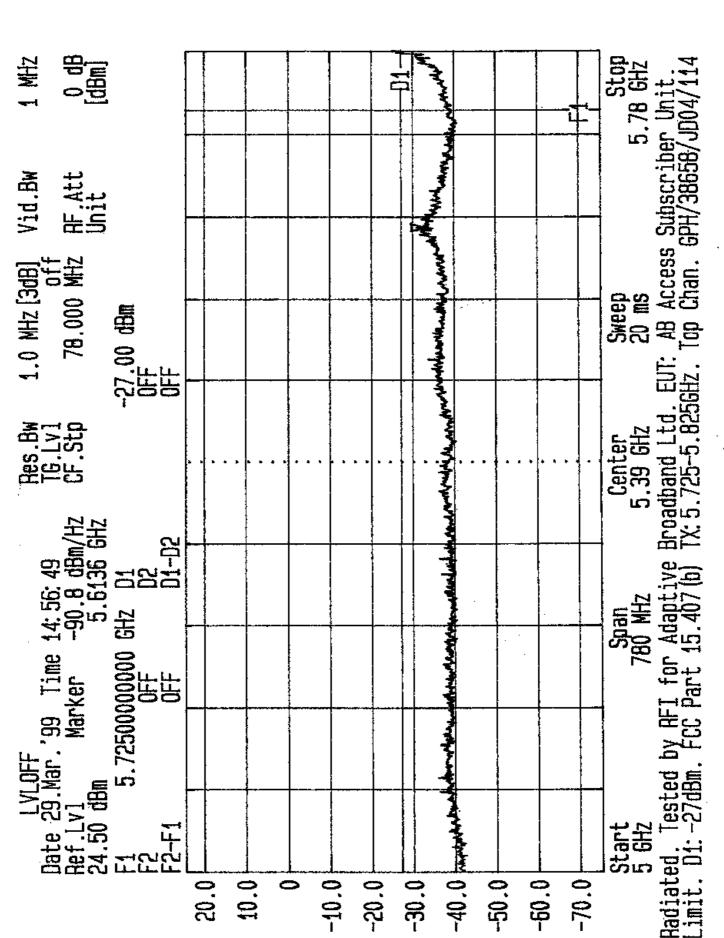
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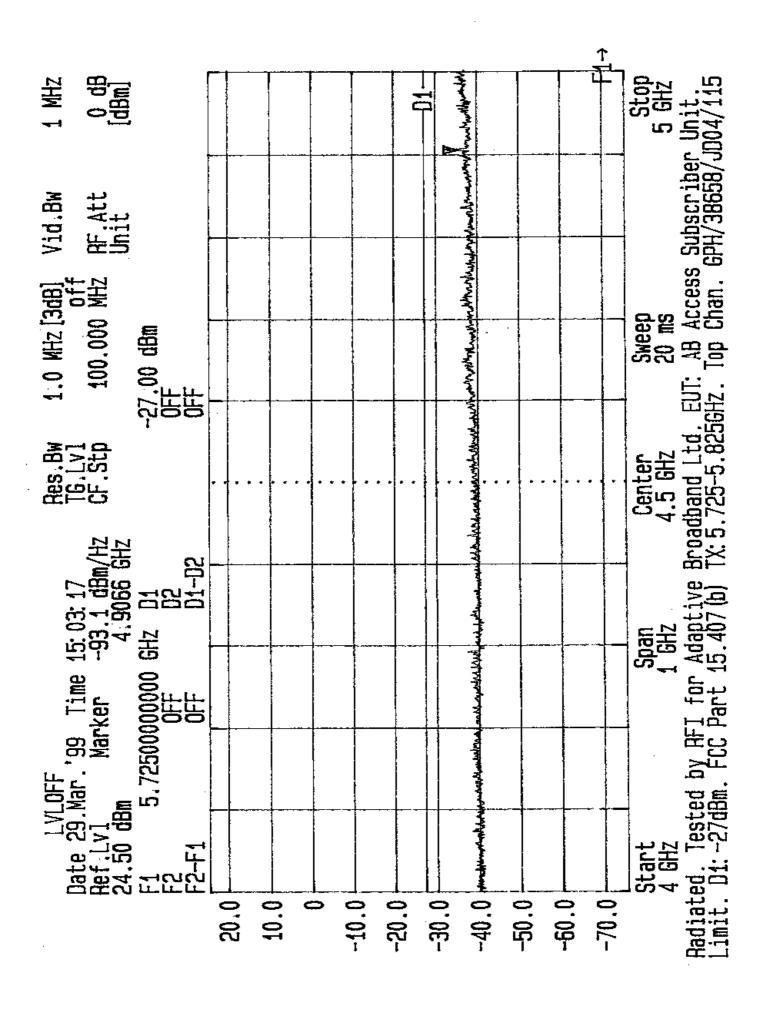
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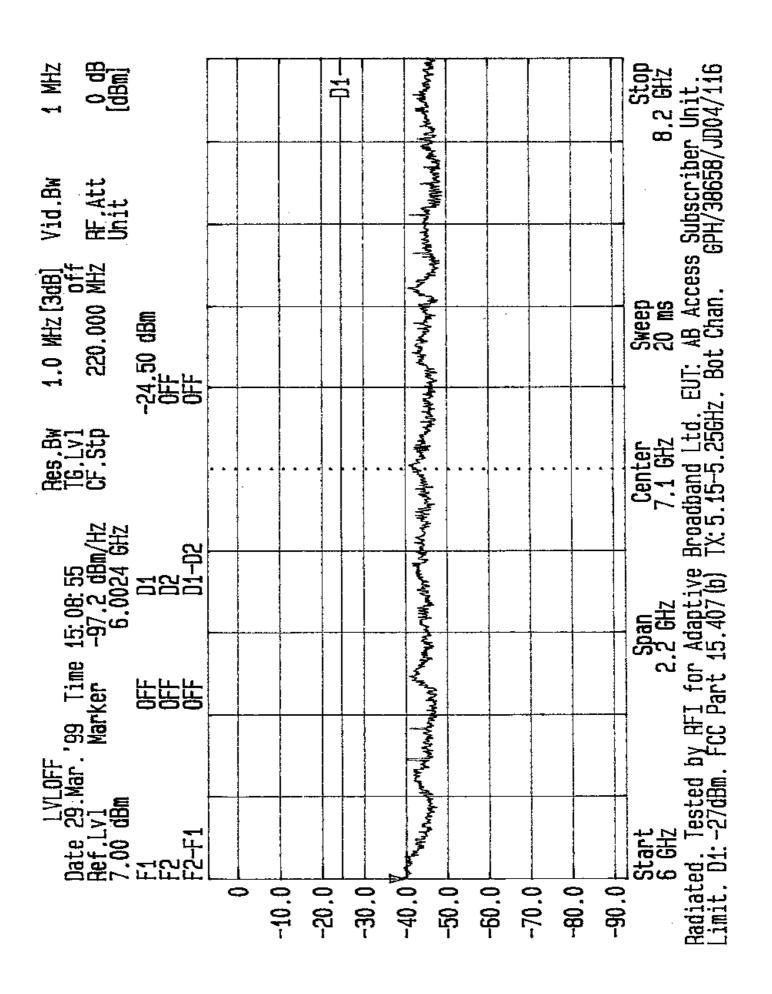


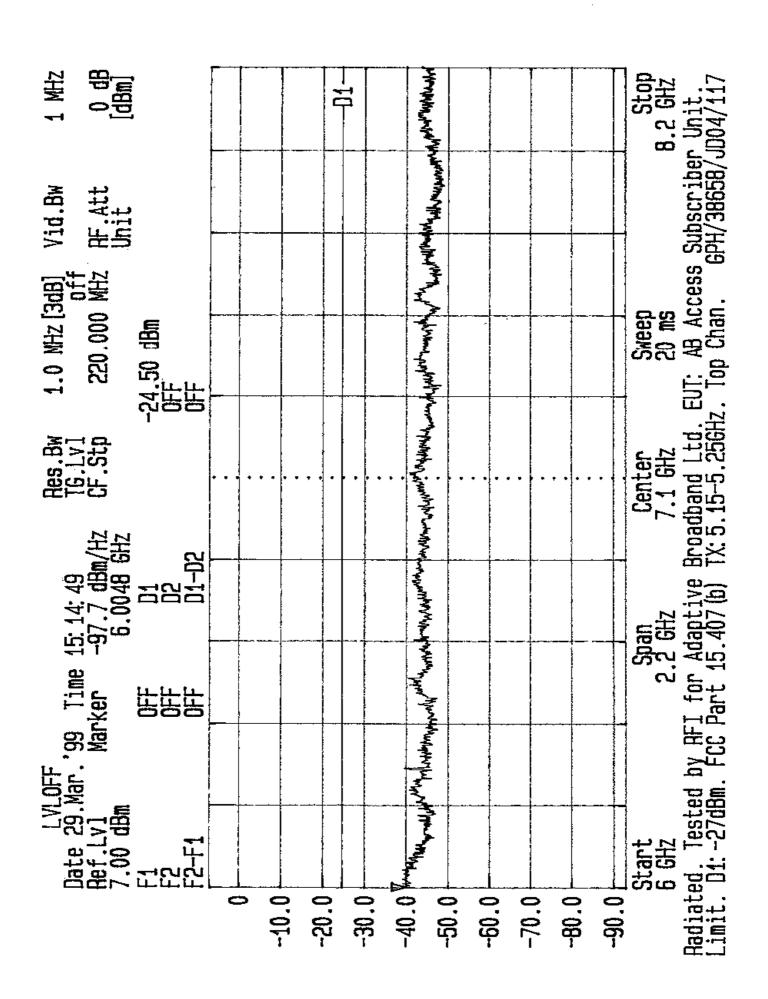




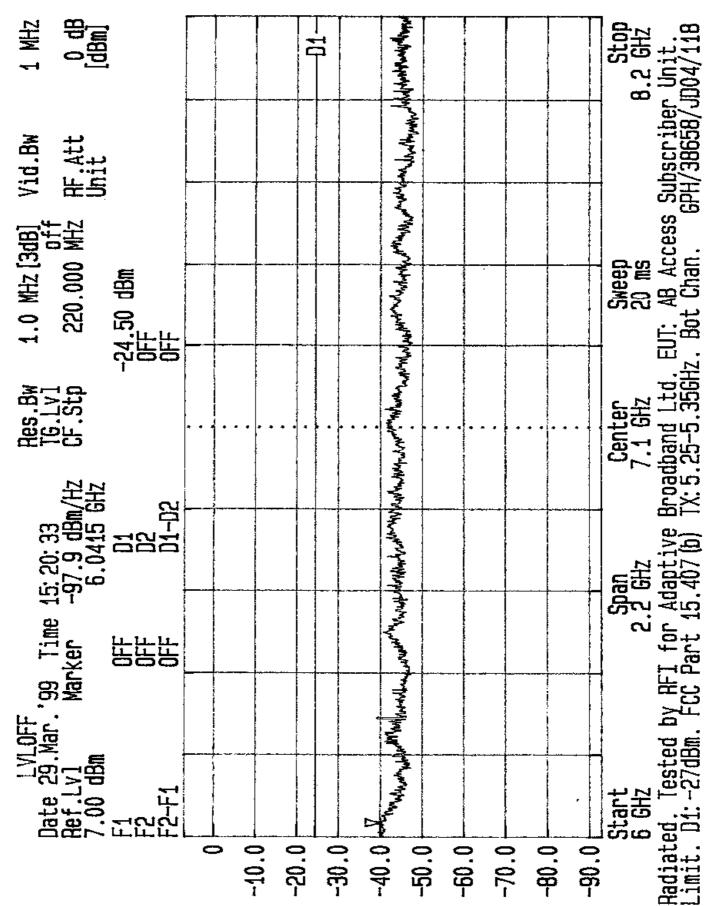
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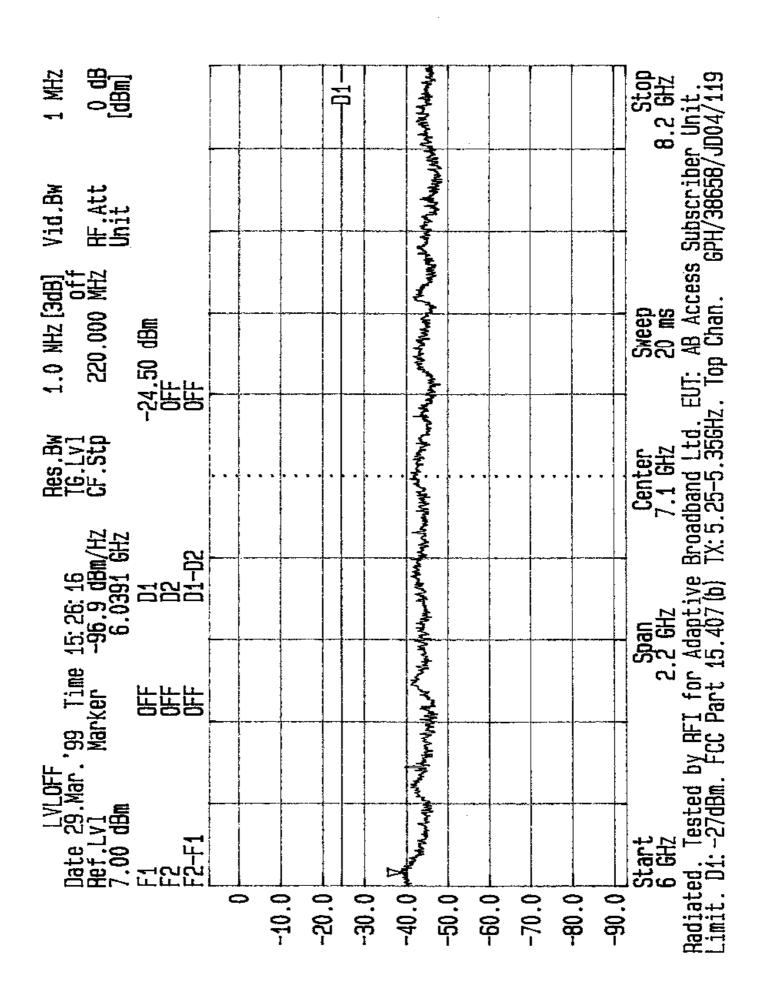
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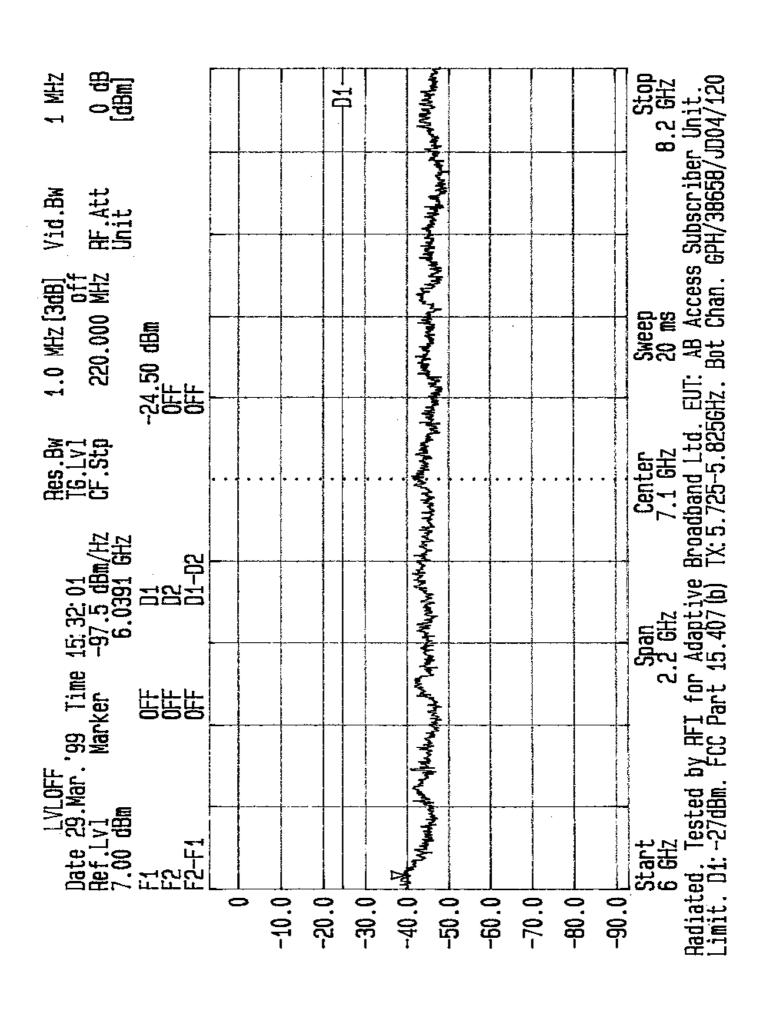


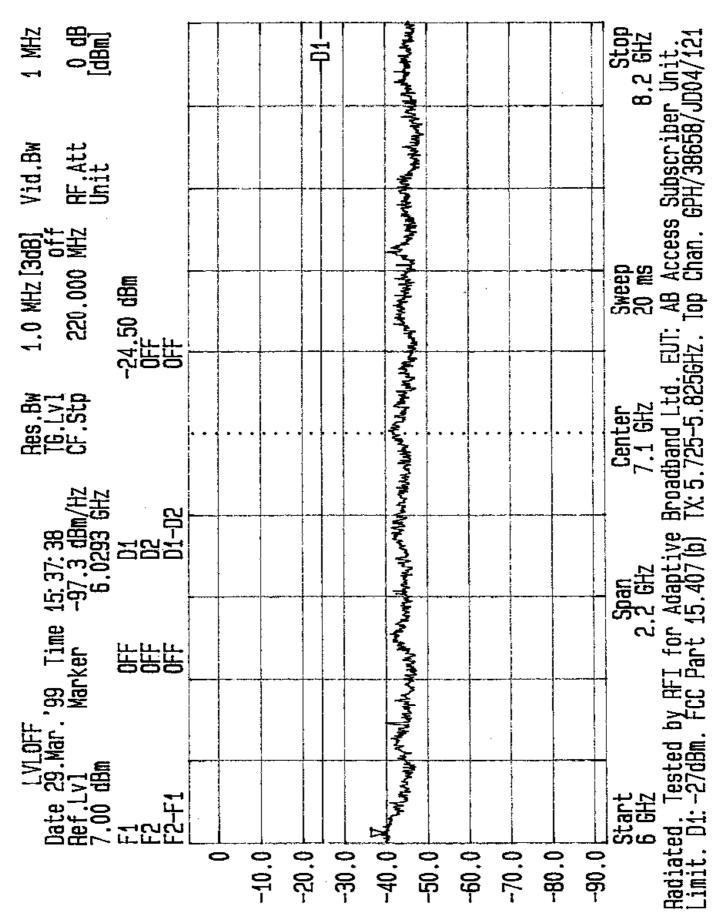


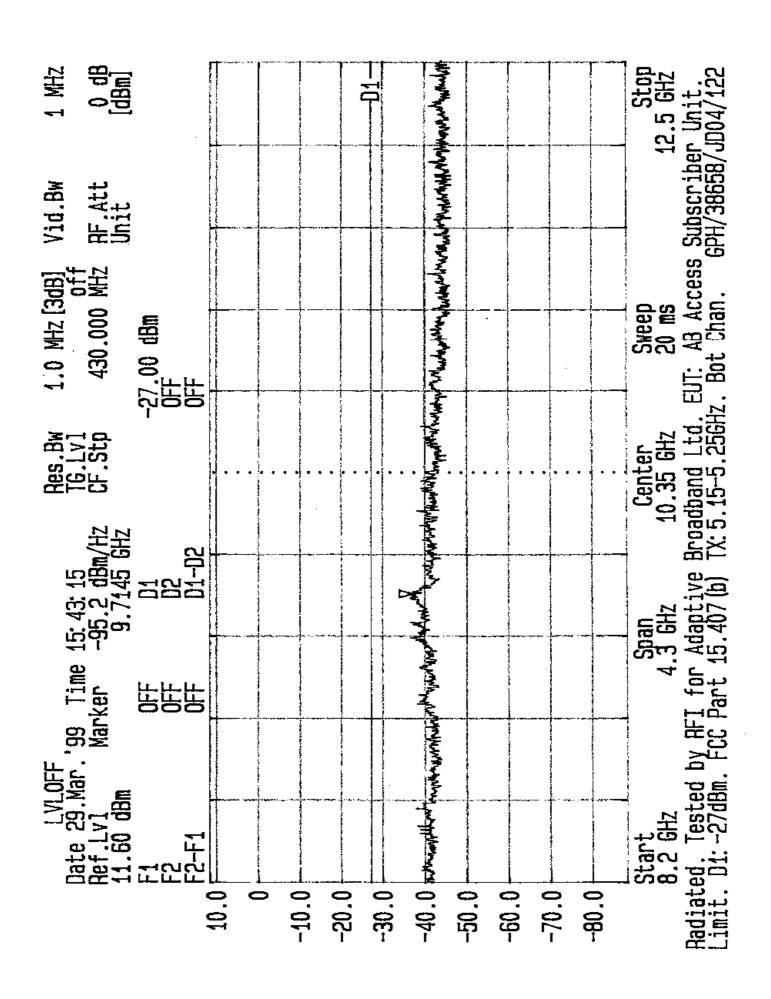
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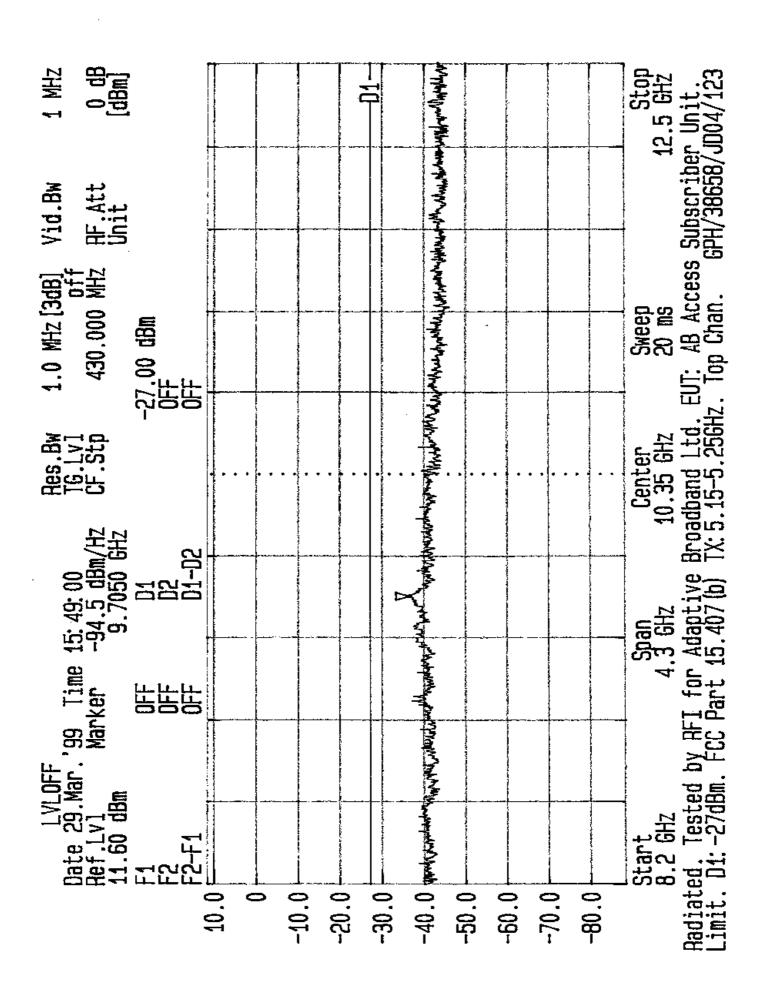


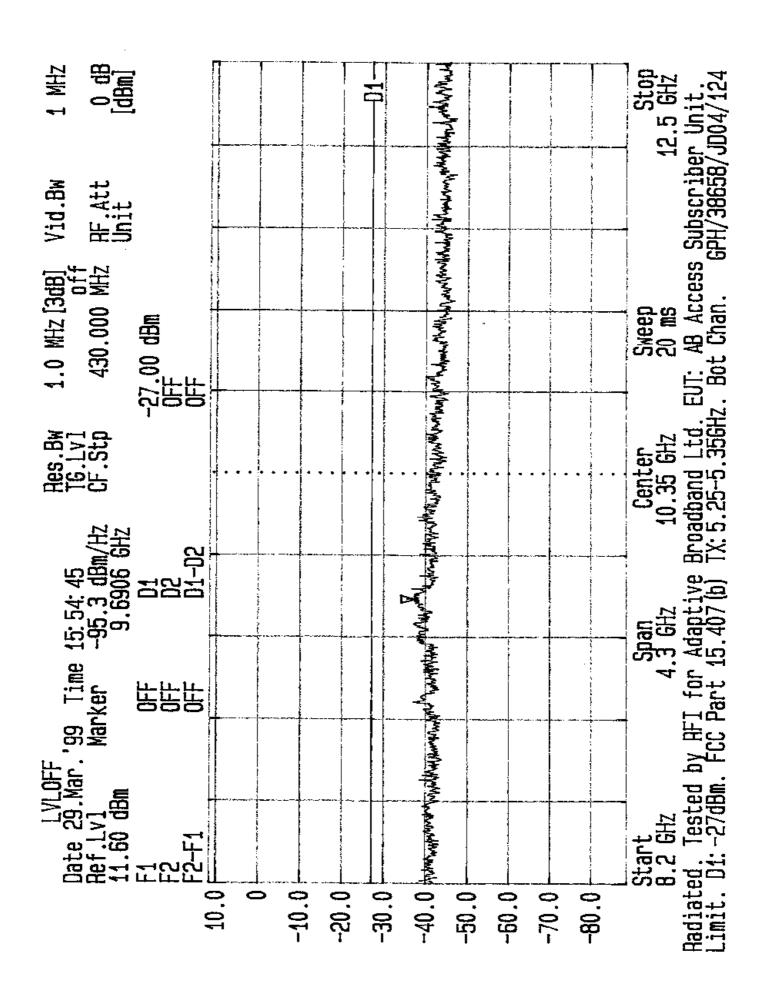


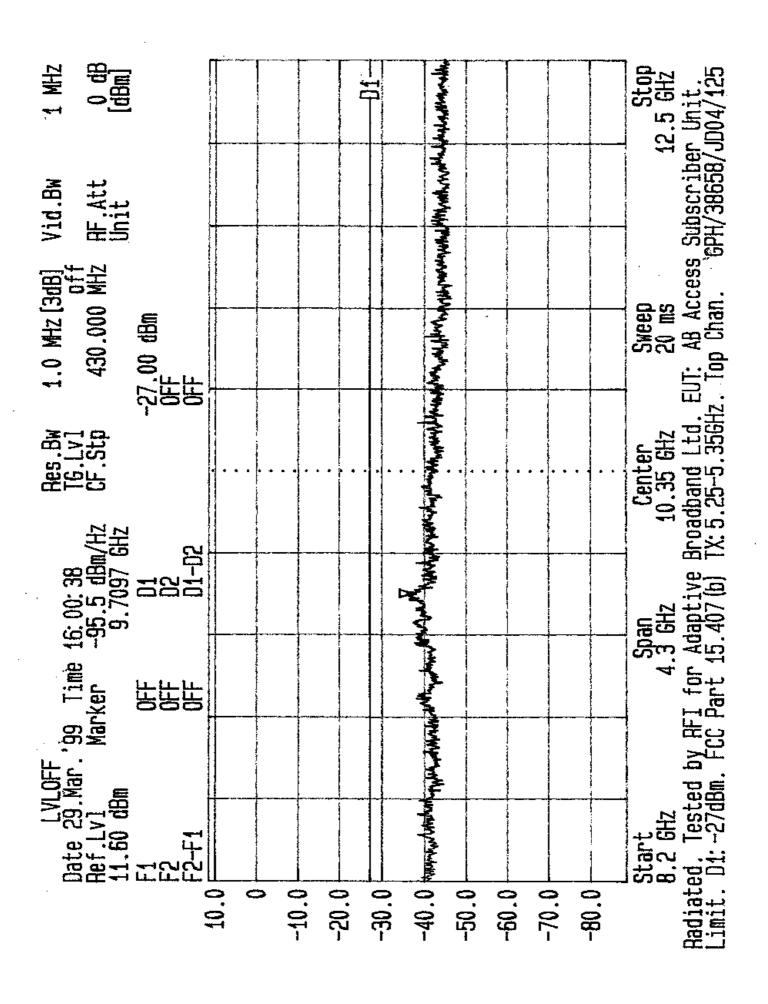


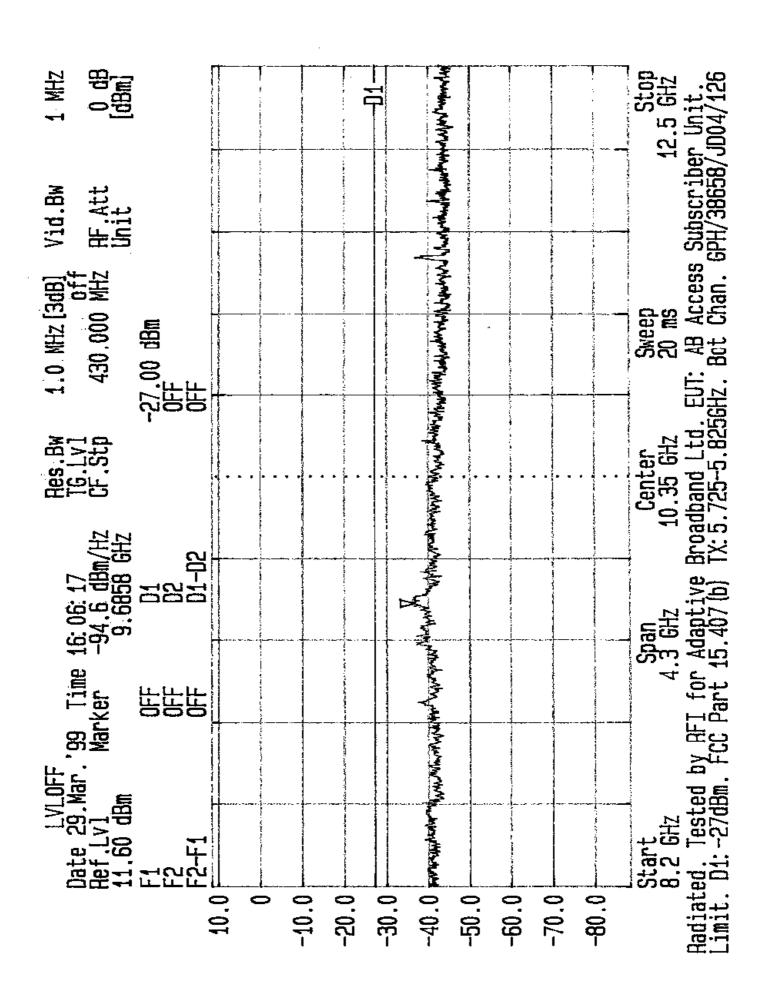




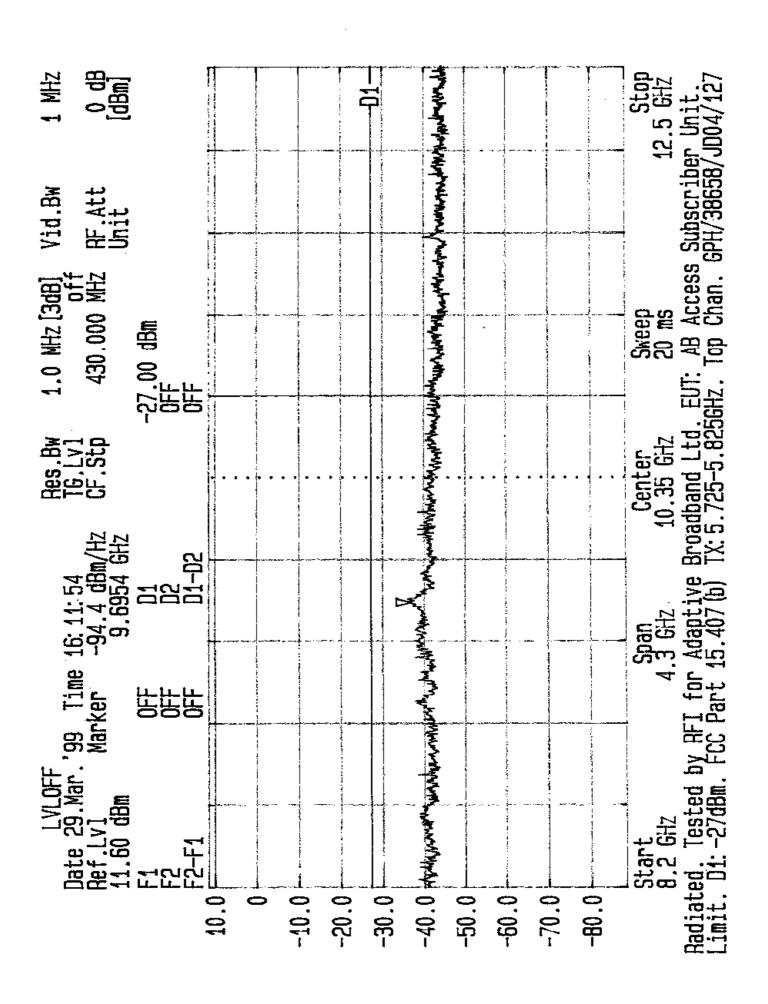


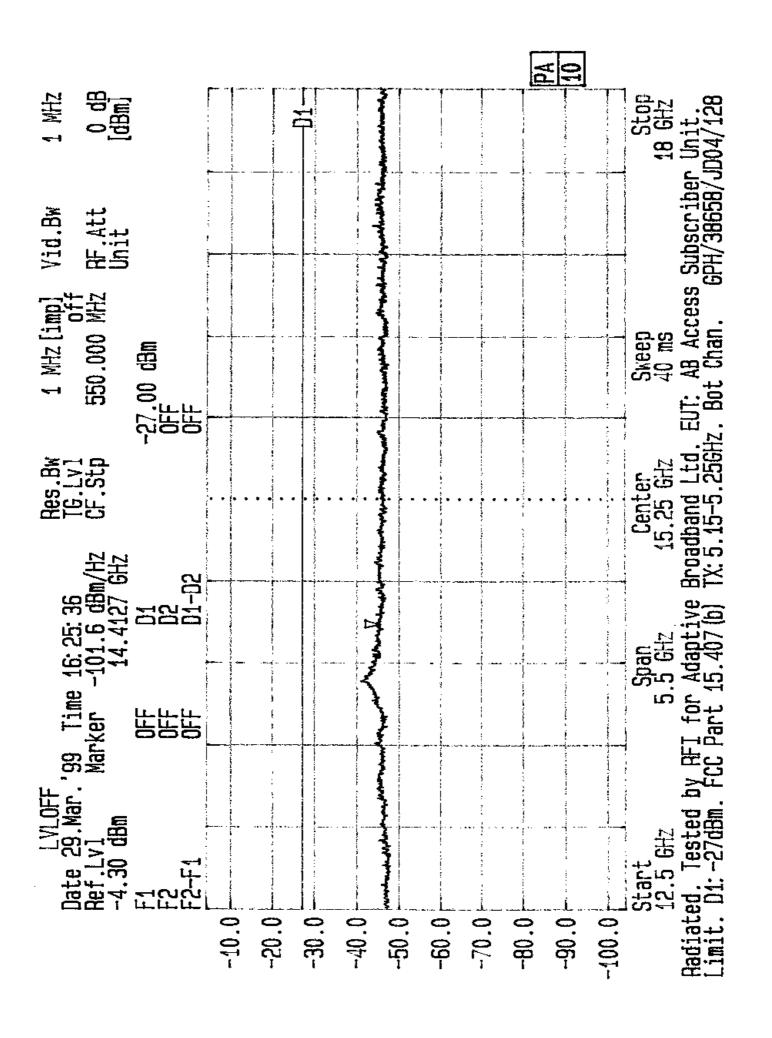


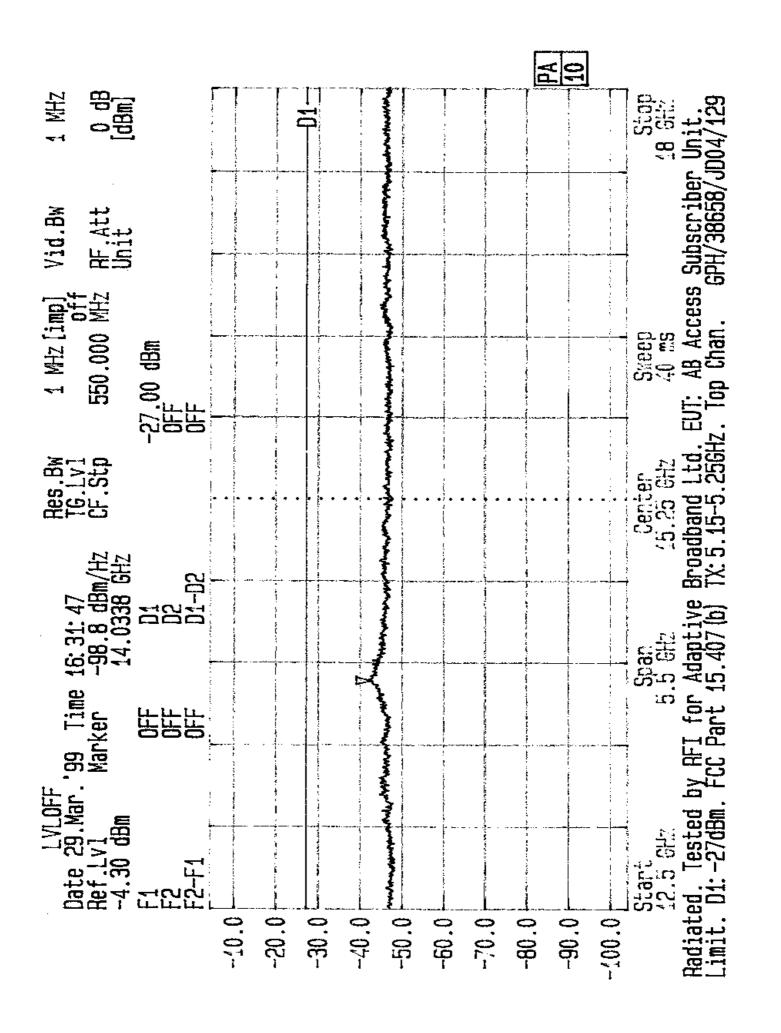


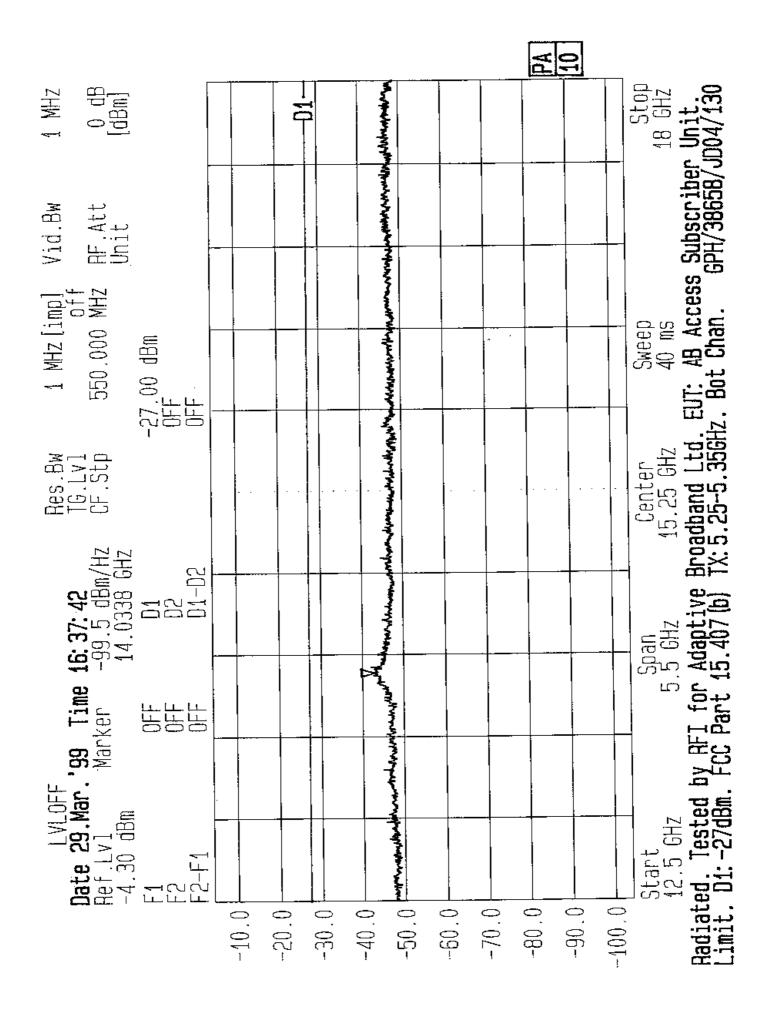


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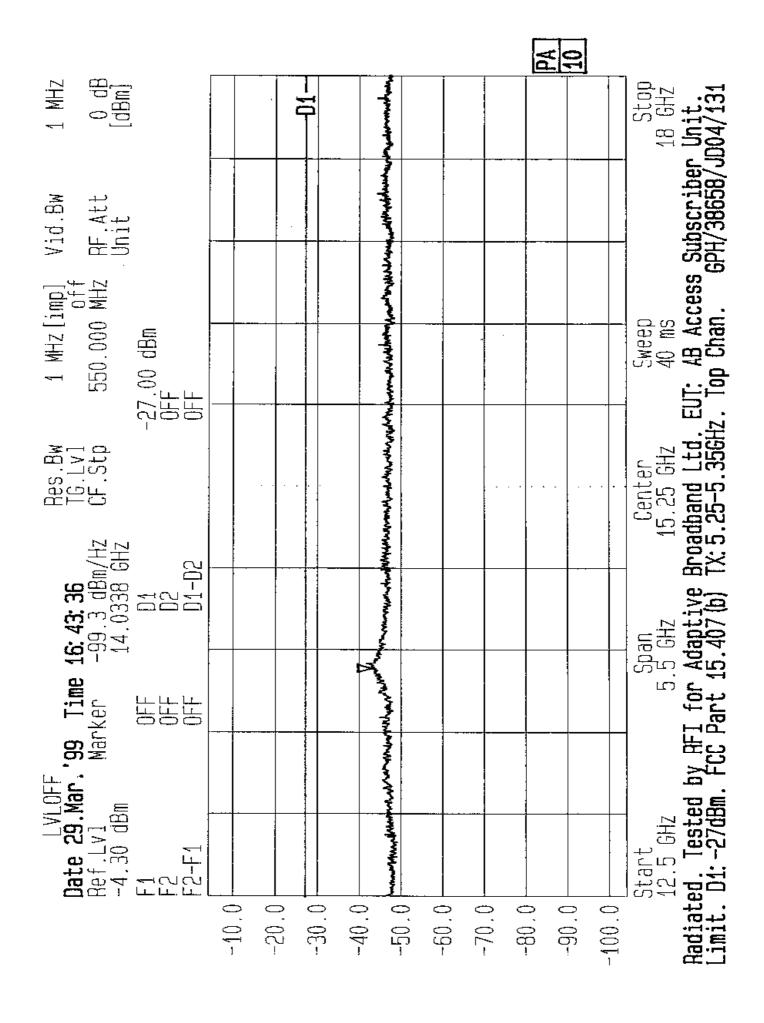


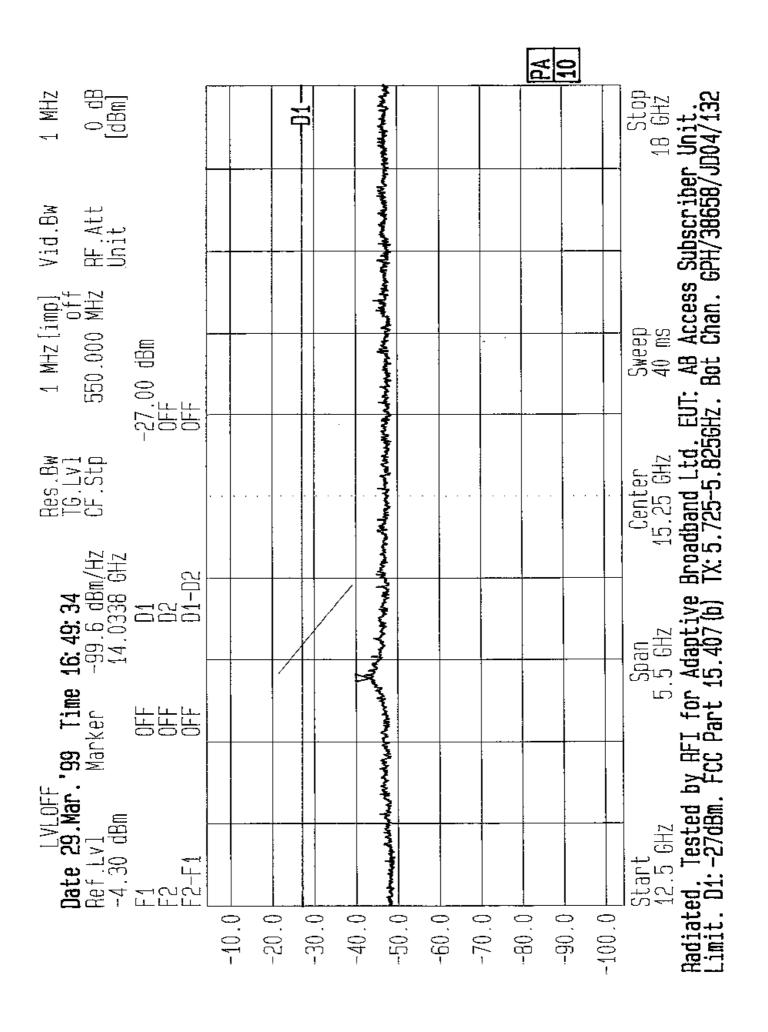


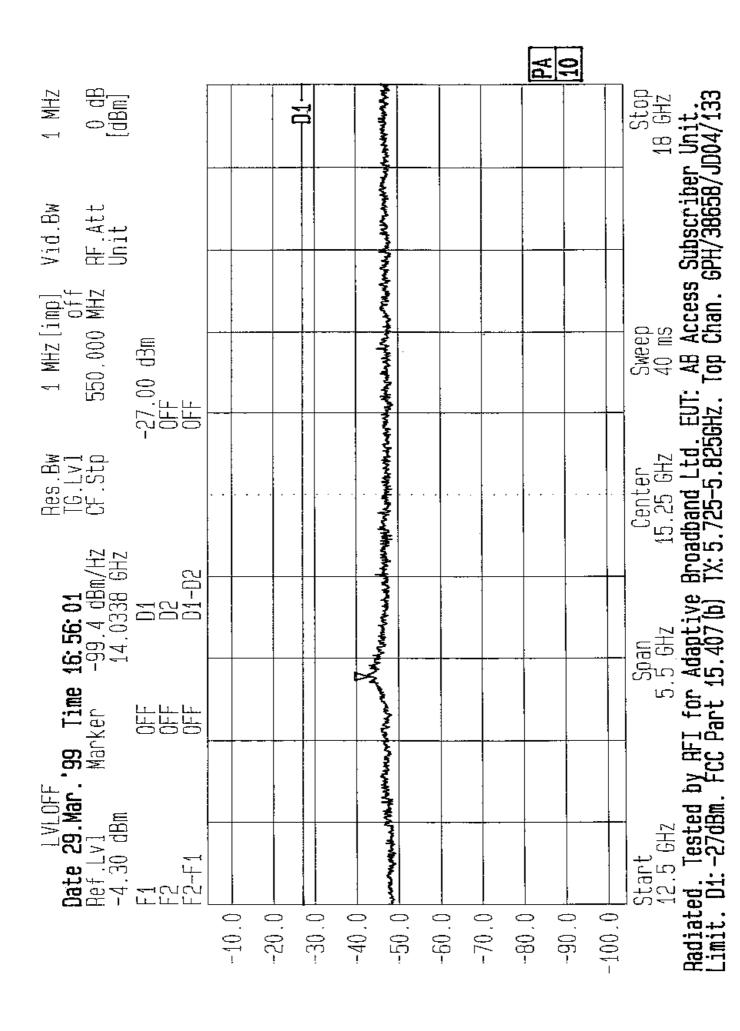




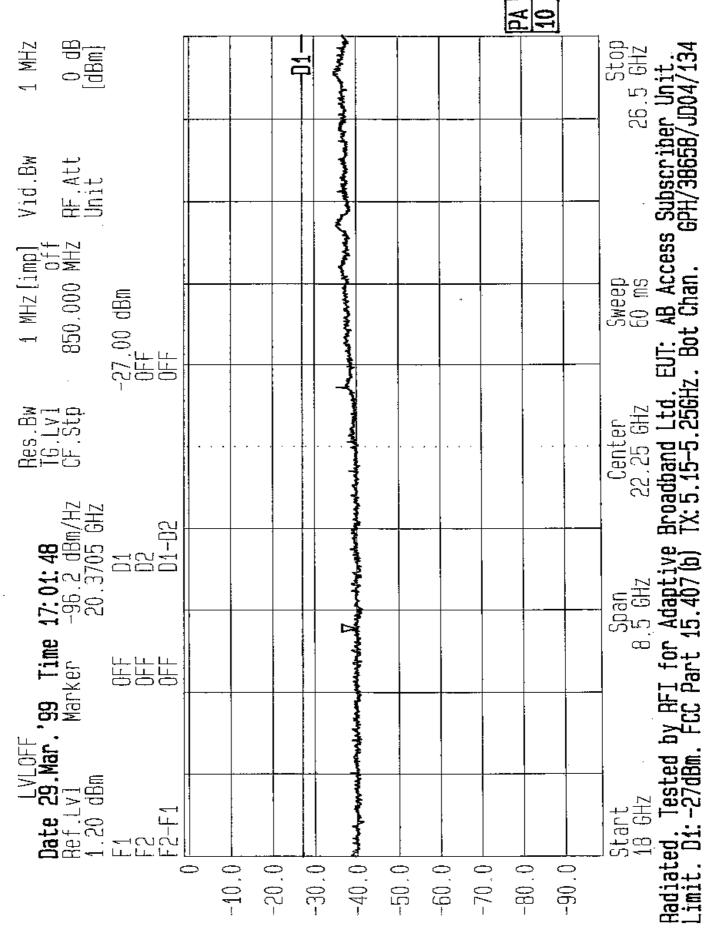
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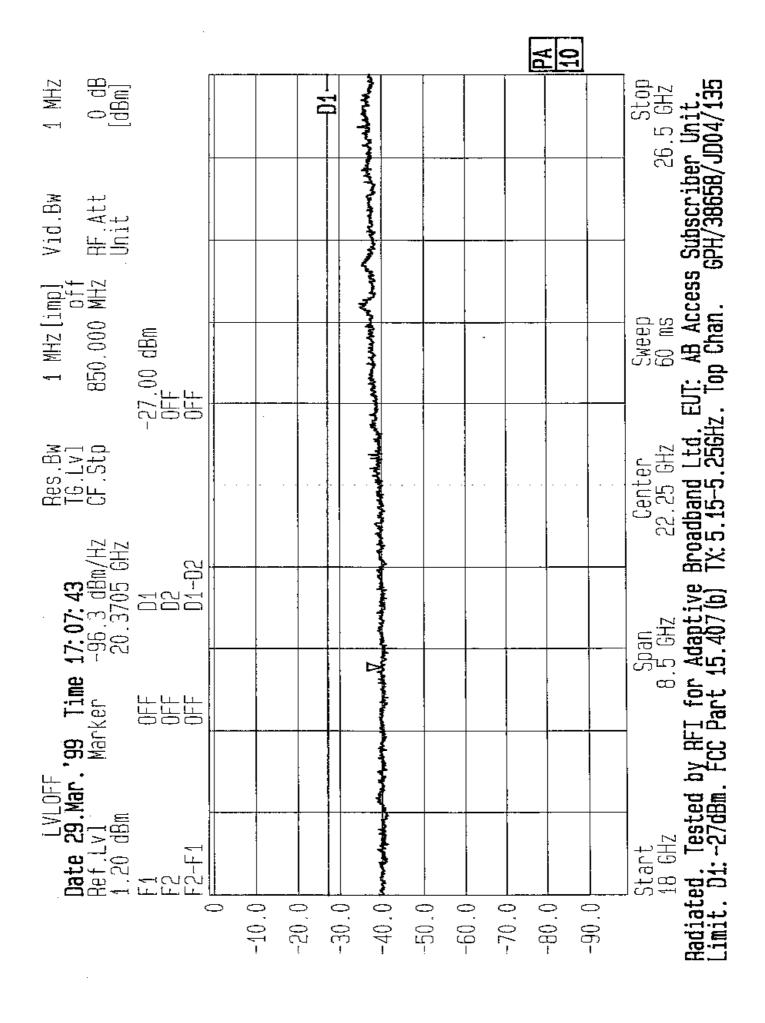


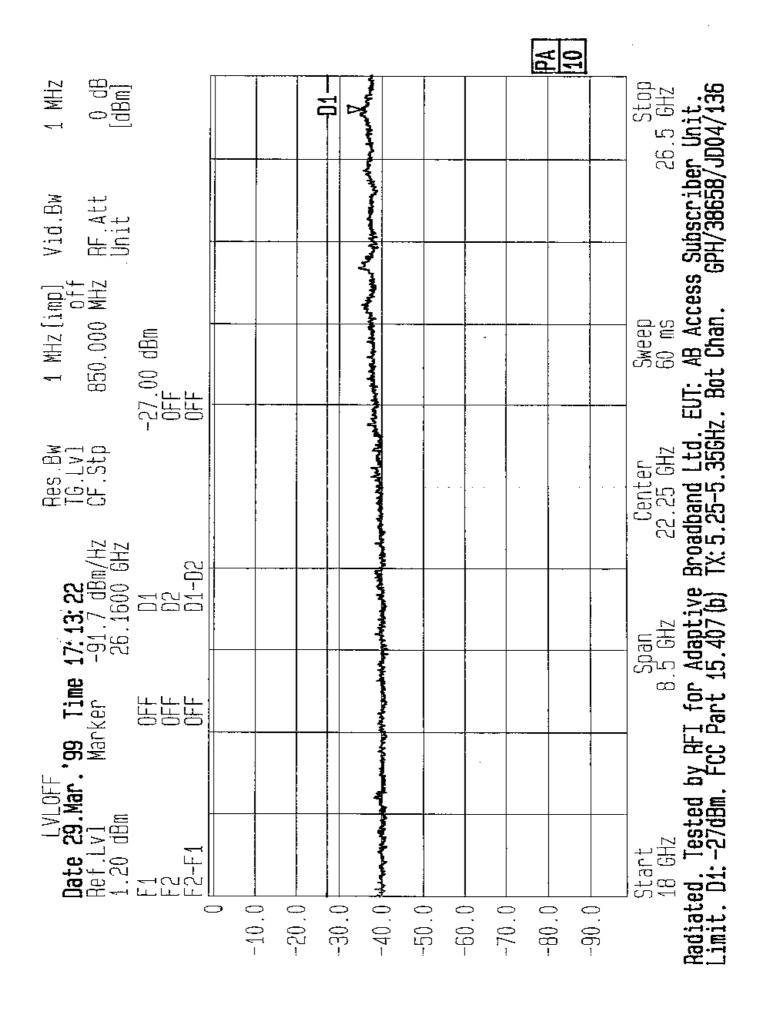




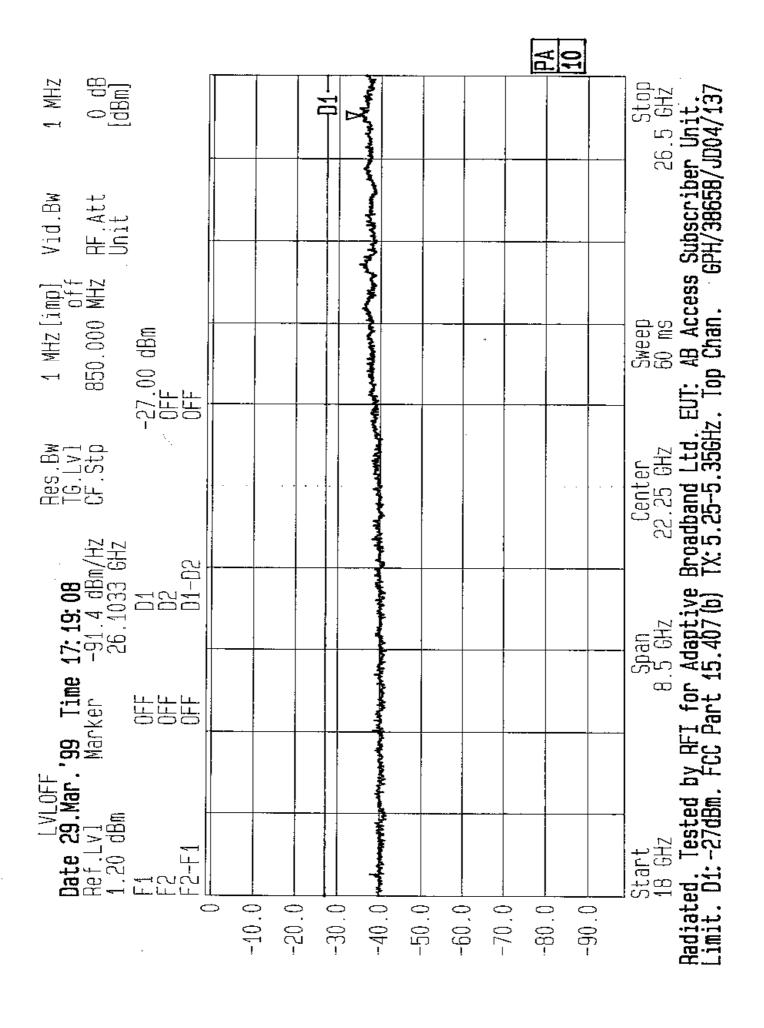
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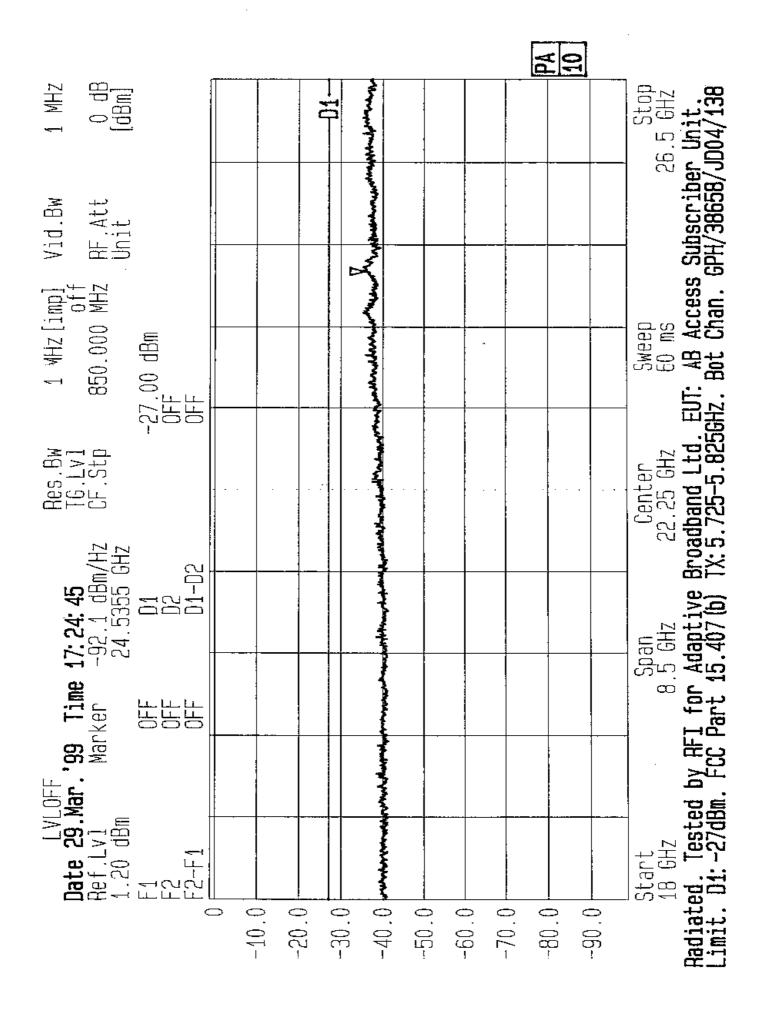


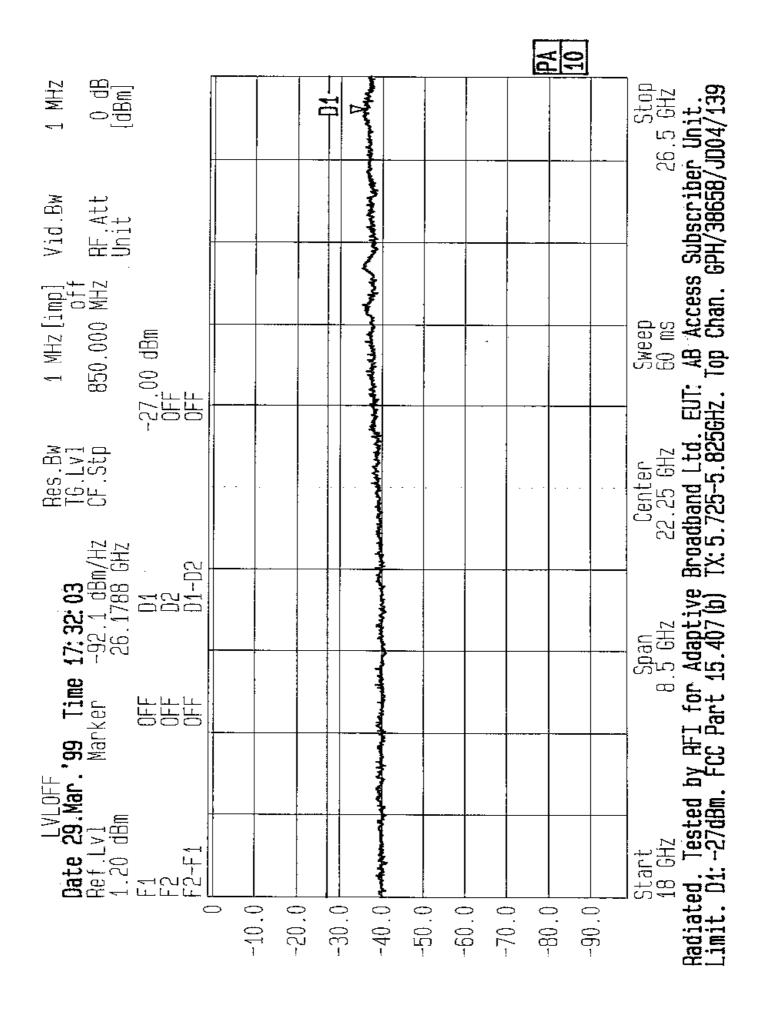




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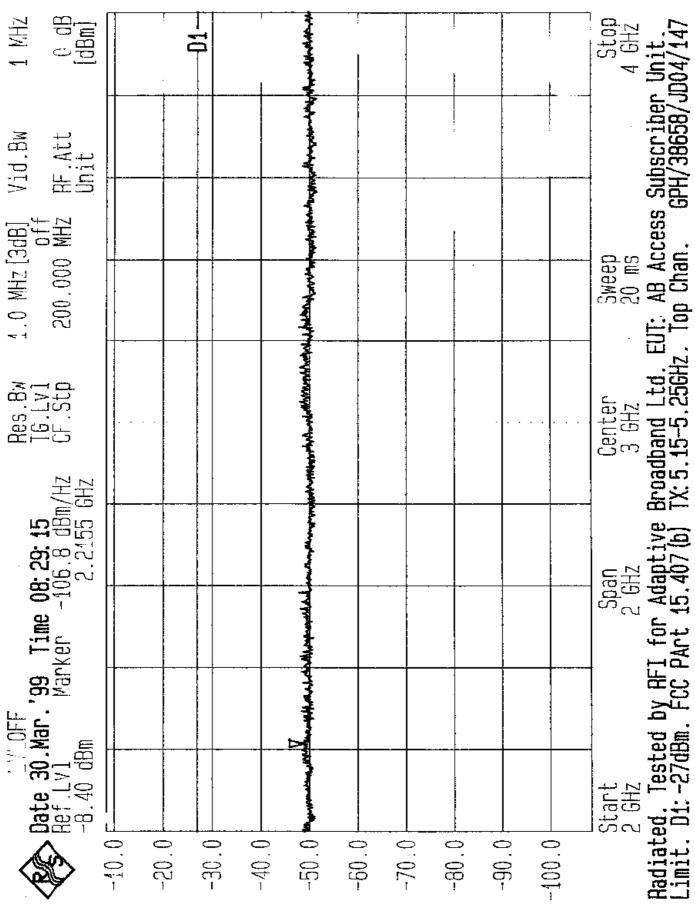
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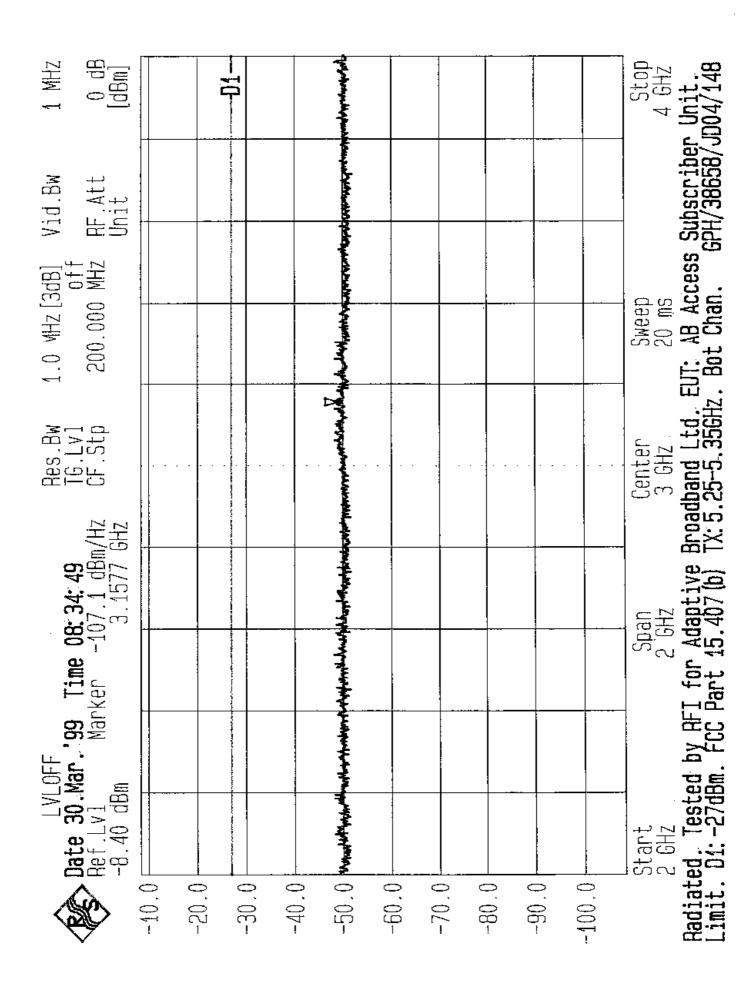
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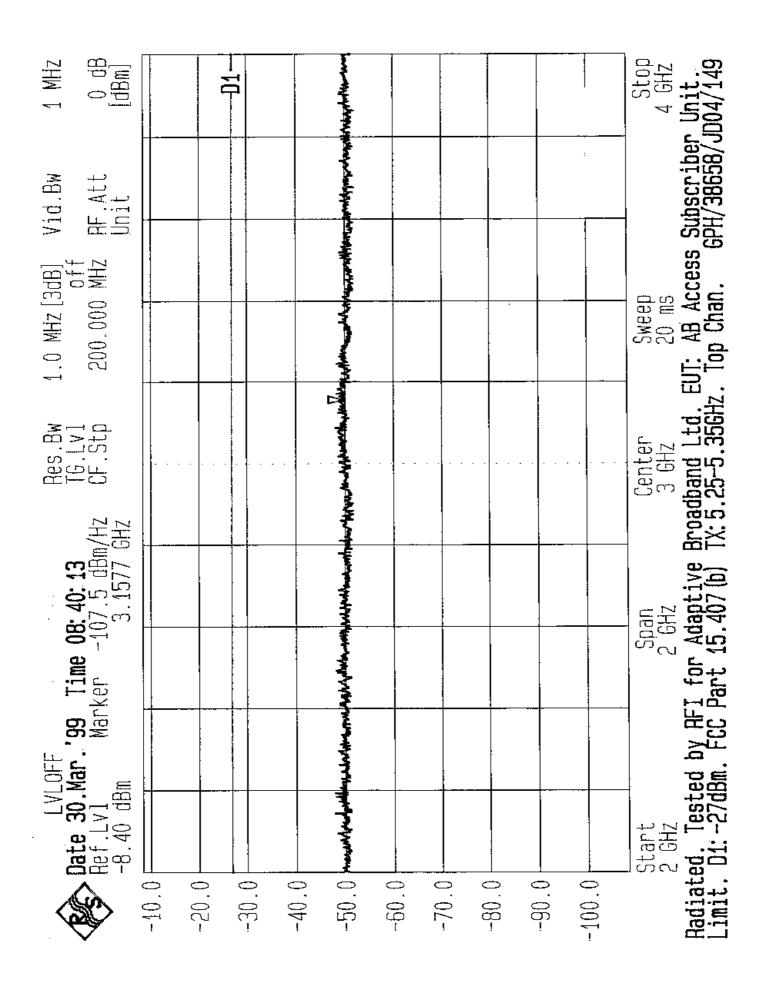
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1 MHZ 0 dB [dBm]		10	Section 200				Stop 4 GHZ Pr Unit. 7,0004/151
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ime 08:54:09 r -107.2 dBm/Hz 2.2133 GHz			AND				Span 2 GHz for Adaptive Broa
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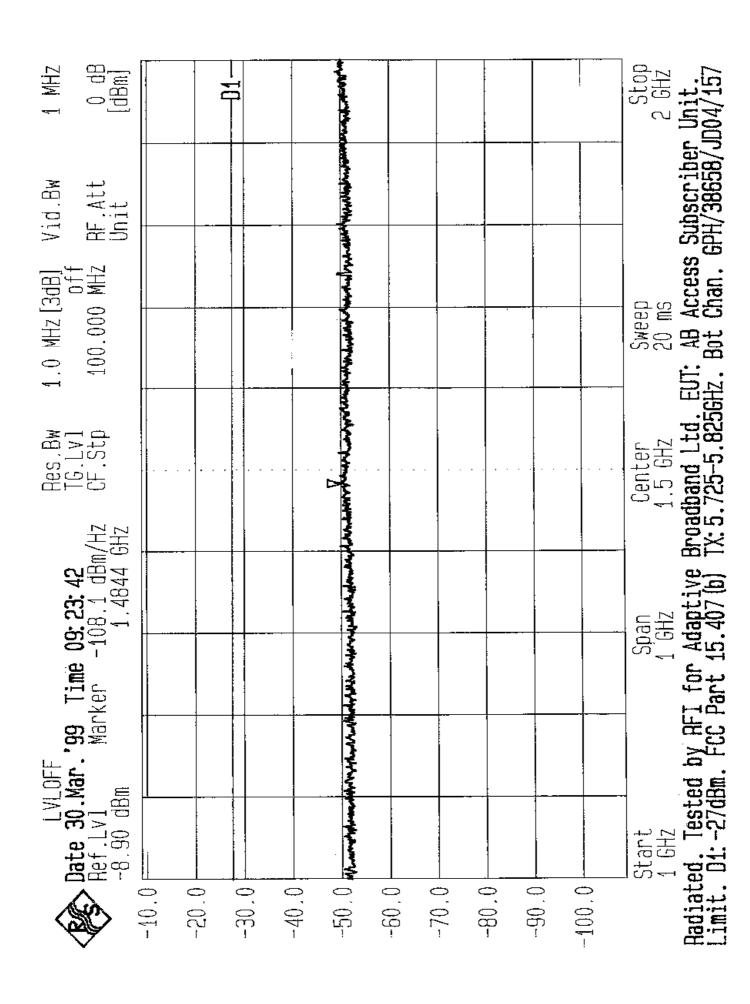
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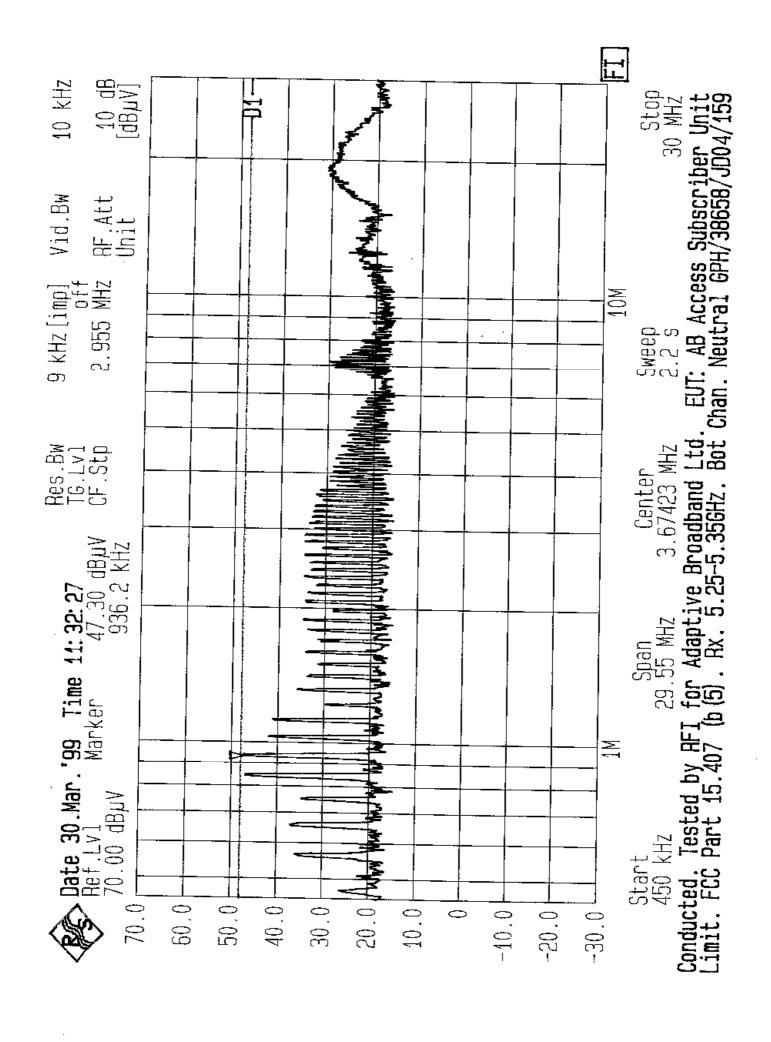
B] Vid.Bw 1 MHz ff Hz RF.Att 0 dB Unit [dBm]		ما المحالية			Start Span Center Sweep Stop 20 ms 2 GHZ
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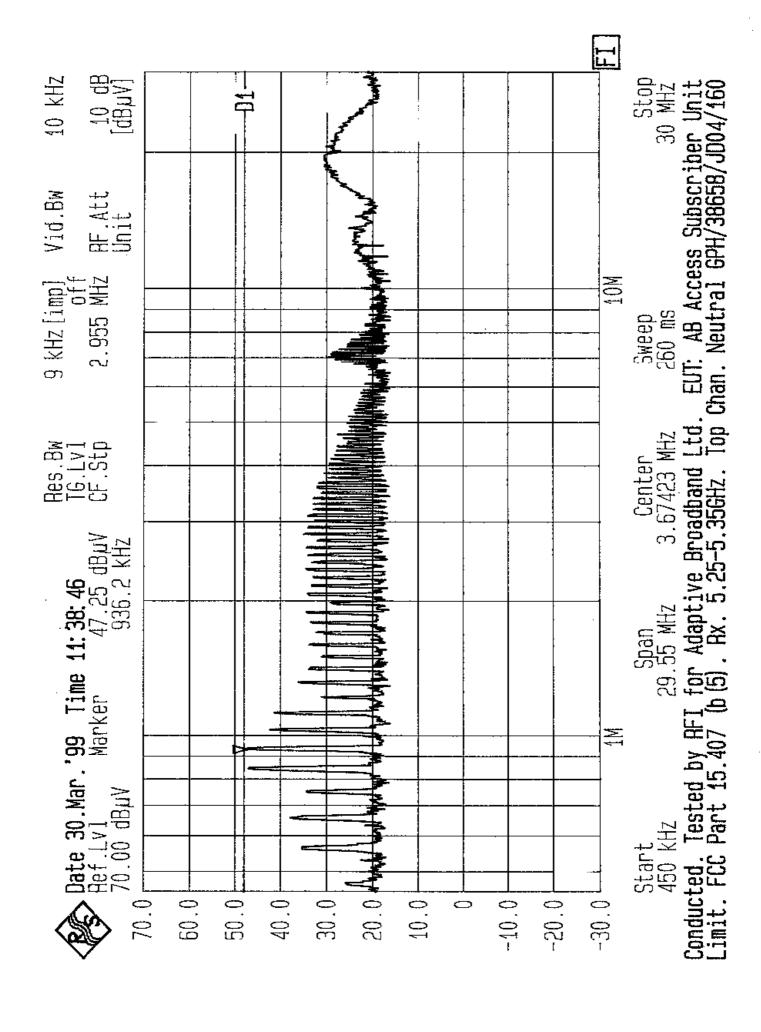
GPH/38658/JJ04/156 Limit. D1: -27dBm. FCC Part 15.407(b) TX: 5.25-5.356Hz. Top Chan.

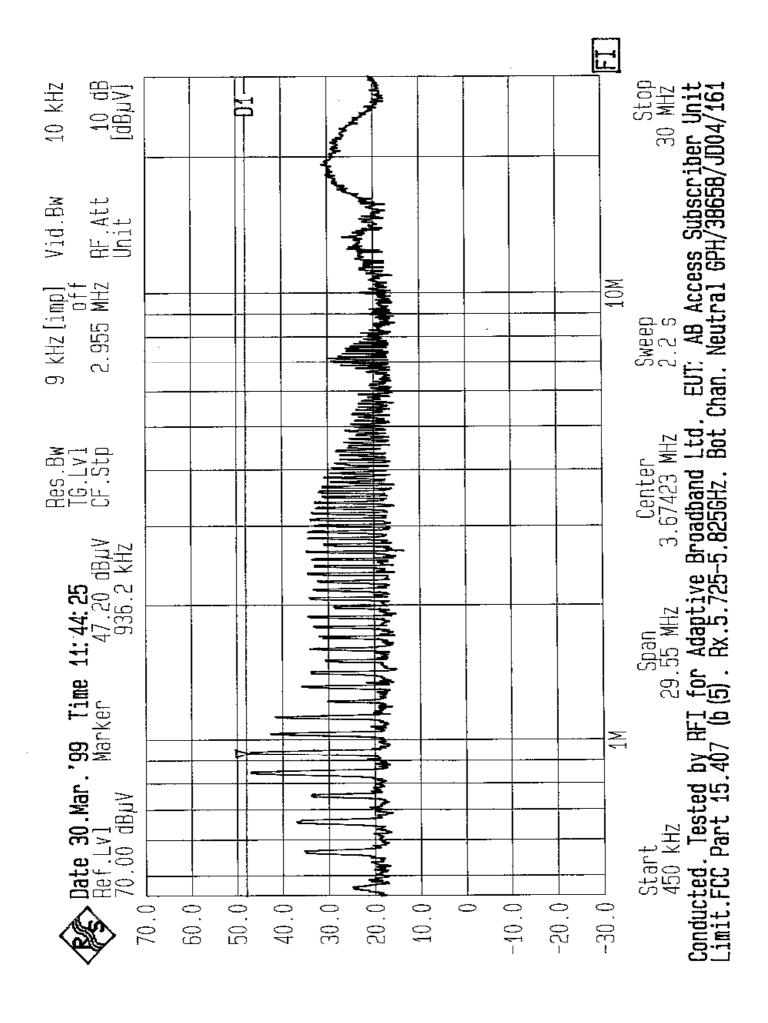


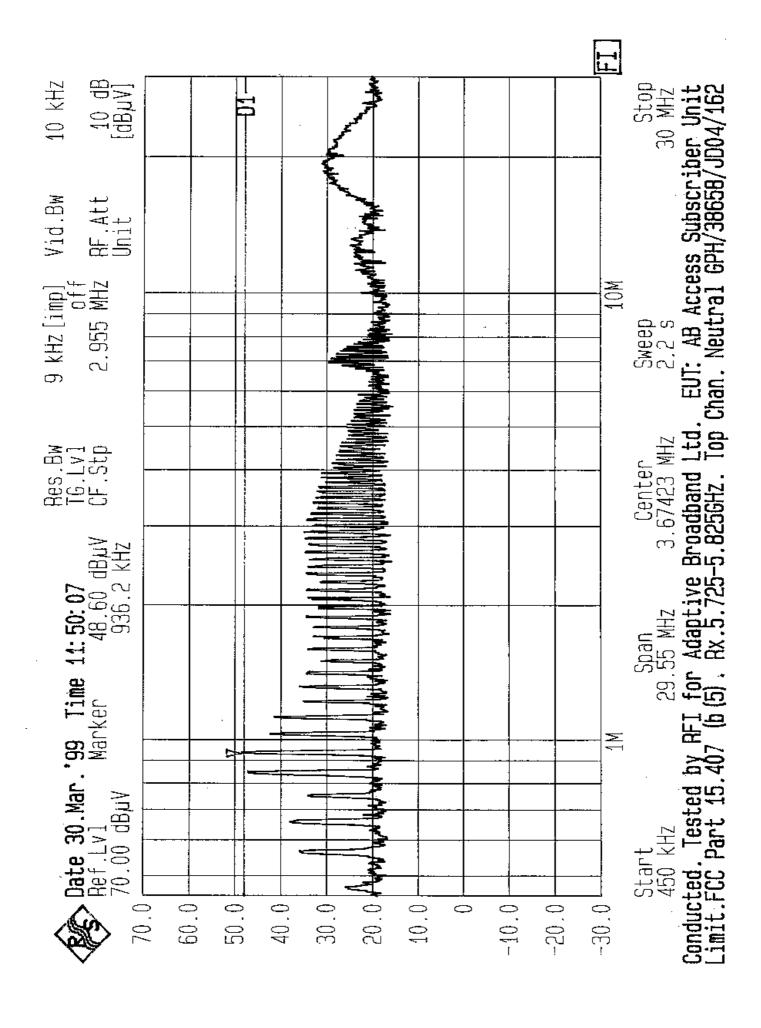
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Vid.Bw RF.Att Unit					Subscribe SPH/38658/
1.0 MHz[3dB] 0ff 100.000 MHz		A STANTON OF THE PROPERTY OF T			Sweep 20 ms UT: AB Access z. Top Chan. 6
Res.Bw TG.Lvl Z CF.Stp		A STATE OF THE PARTY OF THE PAR			Center 1.5 GHz adband Ltd. E 5.725-5.8256H
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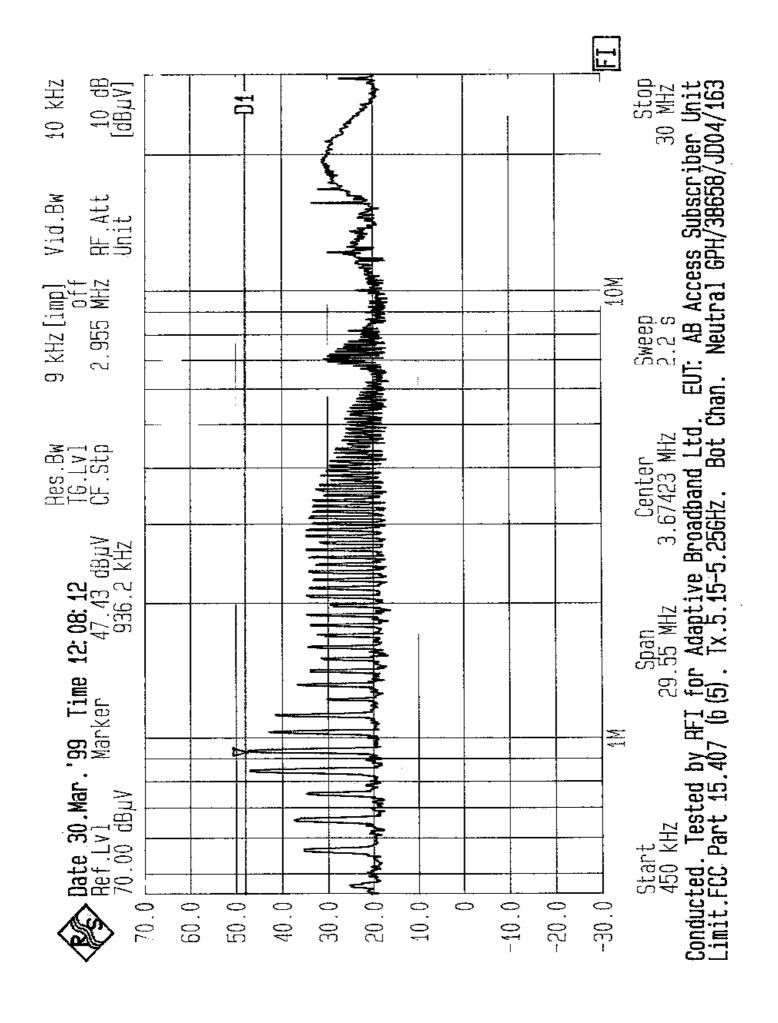


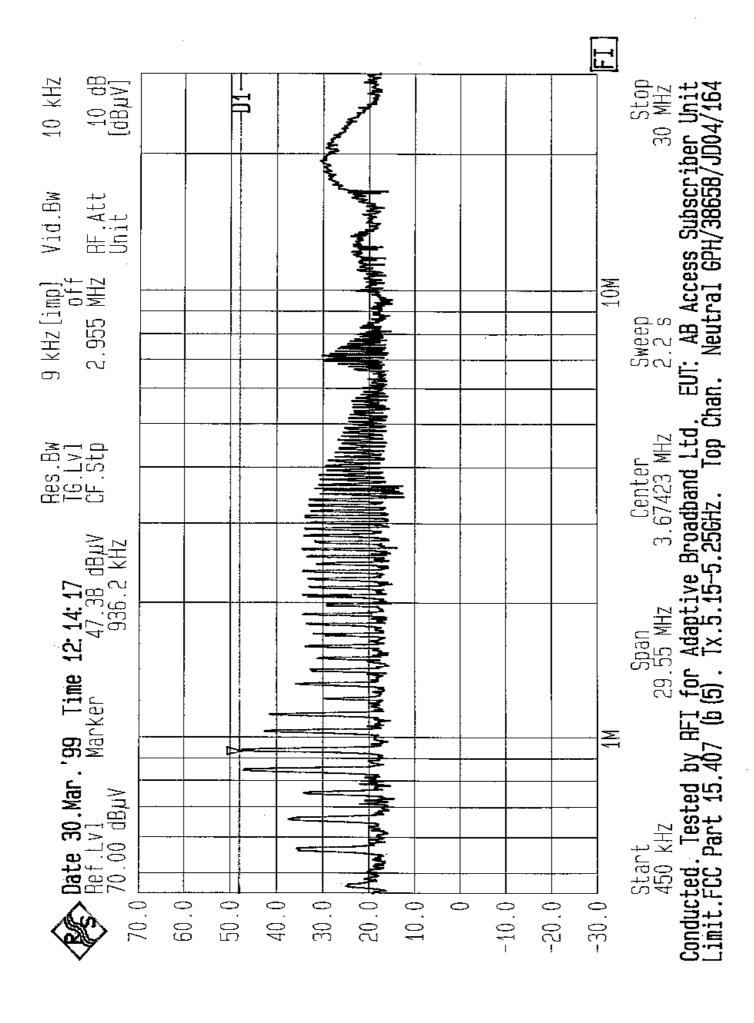
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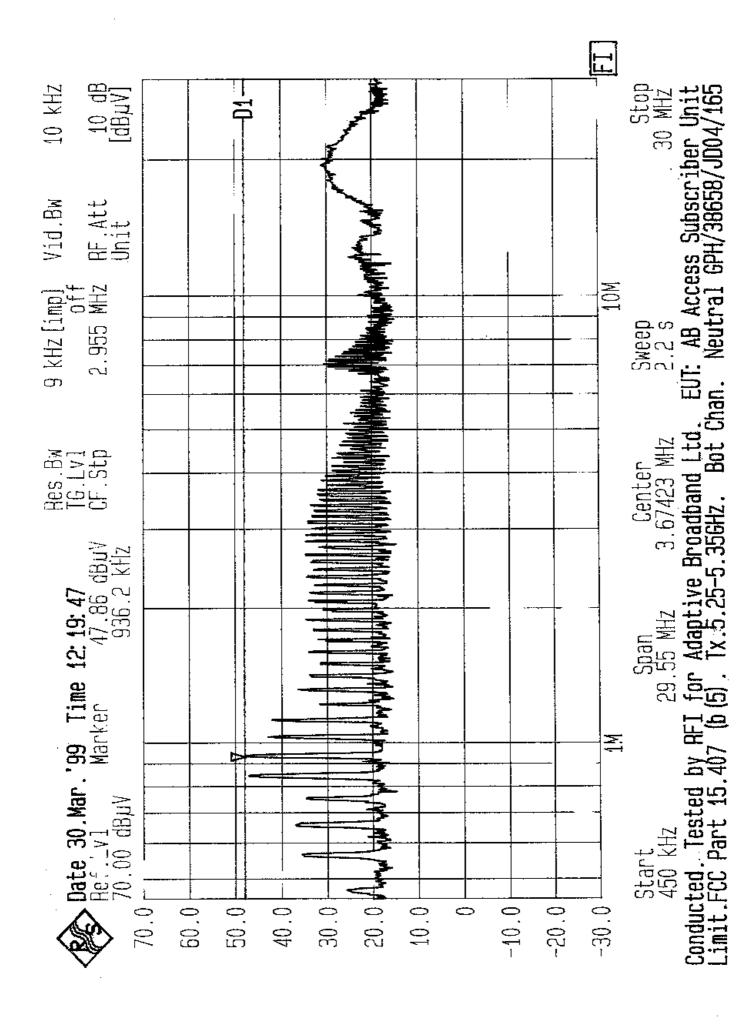


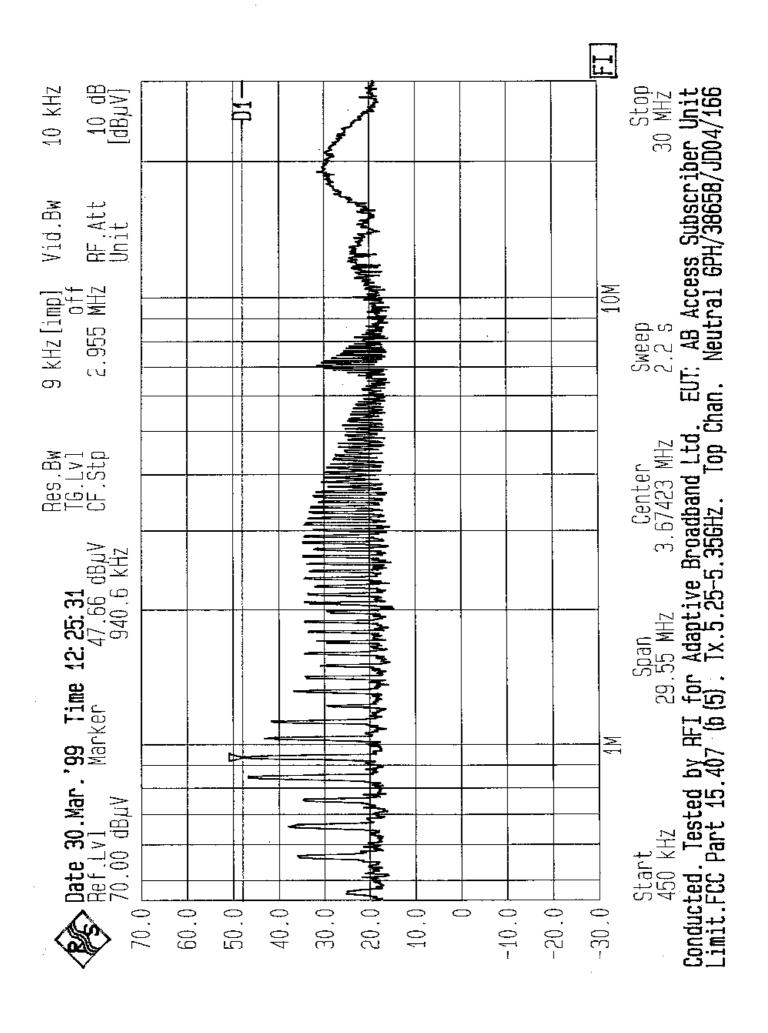


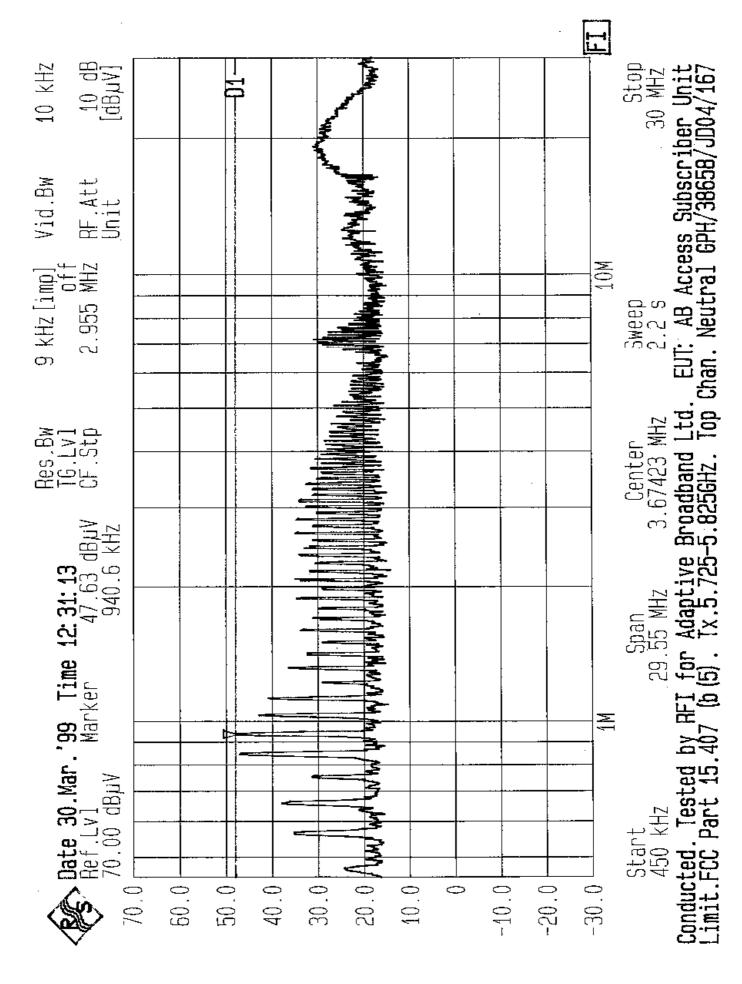




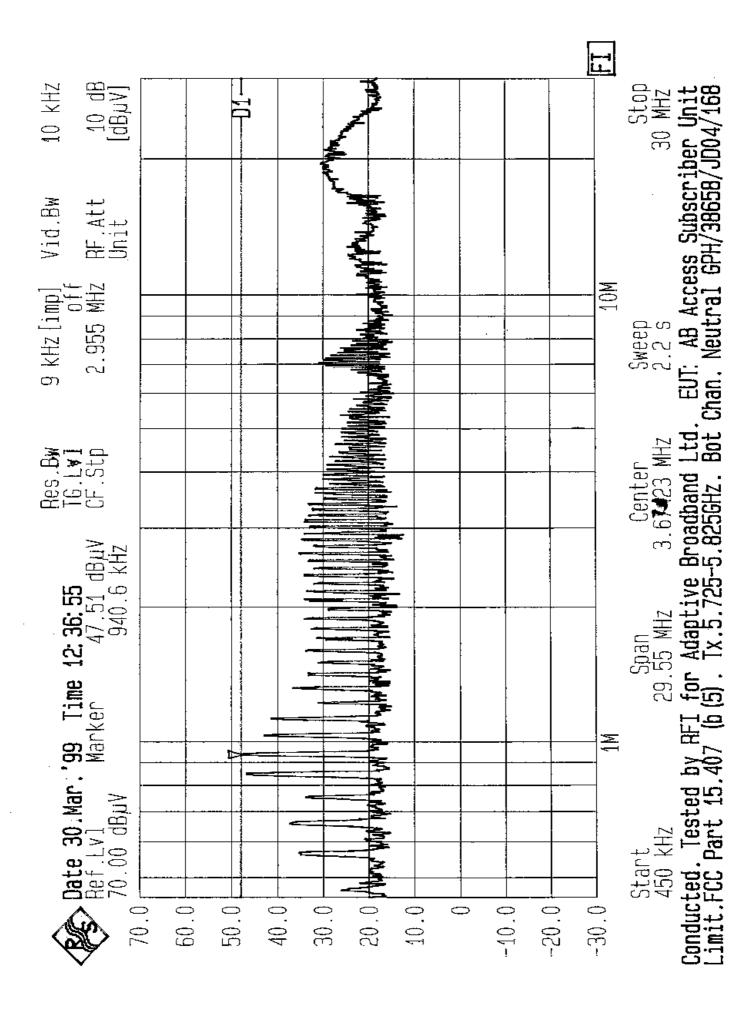


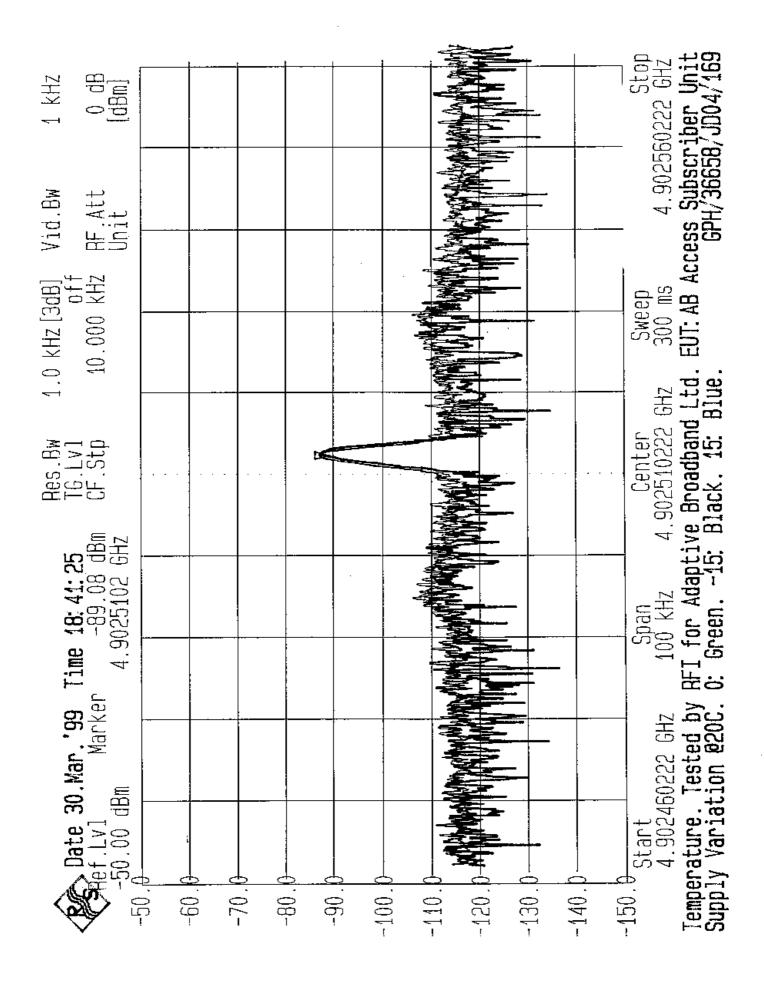


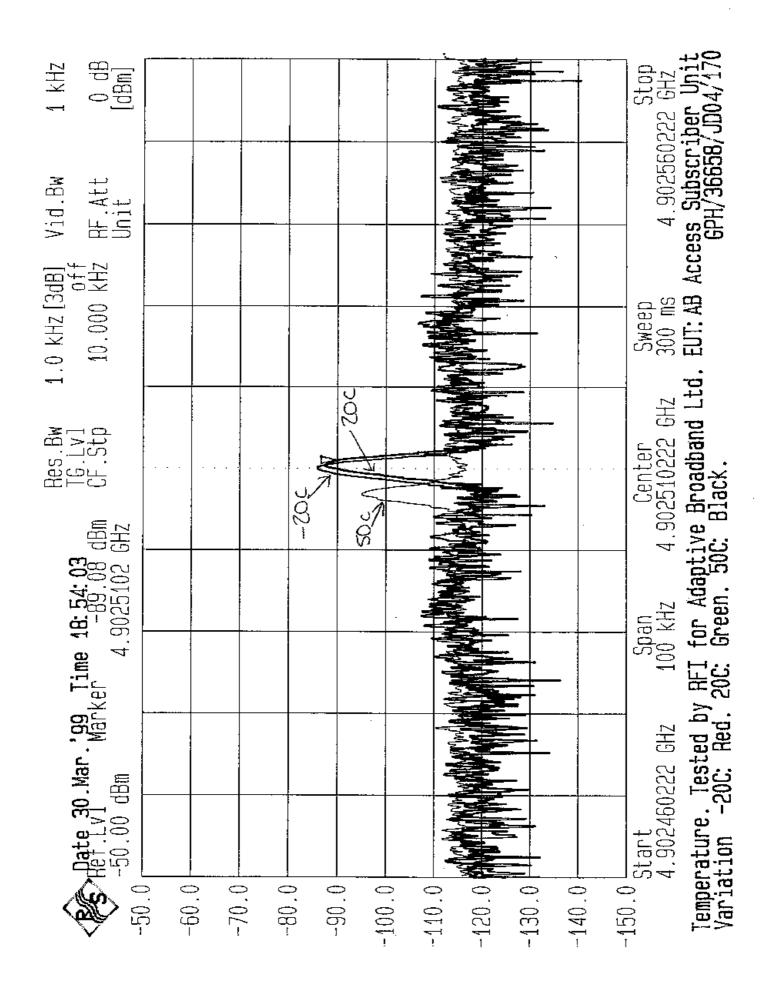




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Issue Date: 22 April 1999

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EMC Department

AB-ACCESS Subscriber Unit (SU)

To: F.C.C. Part 15 Subpart E: 1998

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Appendix 5. Photographs of EUT

This appendix contains the following photographs:

Photo Reference Number	Title
PHT/38658JD04/001:	Conducted Emissions – Front View
PHT/38658JD04/002:	Conducted Emissions – Side View
PHT/38658JD04/003:	Radiated Emissions – Front View
PHT/38658JD04/004:	Radiated Emissions – Rear View

These pages are not included in the total number of pages for this report.

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Issue Date: 22 April 1999

Test Of: Adaptive Broadband Ltd

EMC Department

AB-ACCESS Subscriber Unit (SU)

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TEST REPORT Photograph Section

EMC Department

Test Of:

Adaptive Broadband Ltd AB-ACCESS Subscriber Unit (SU)

F.C.C. Part 15 Subpart E: 1998 To:

PHT/38658JD04/001: Conducted Emissions – Front View



TEST REPORT Photograph Section

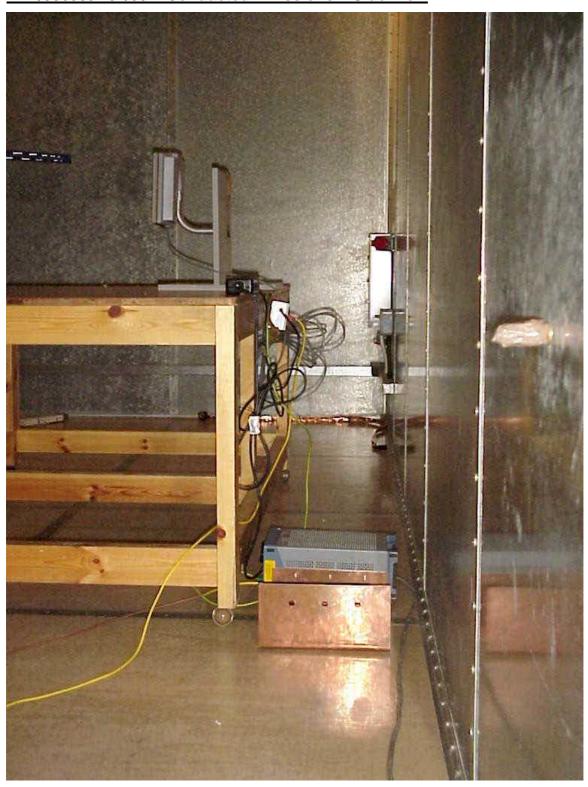
EMC Department

Test Of:

Adaptive Broadband Ltd AB-ACCESS Subscriber Unit (SU)

F.C.C. Part 15 Subpart E: 1998 To:

PHT/38658JD04/002: Conducted Emissions - Side View



TEST REPORT Photograph Section

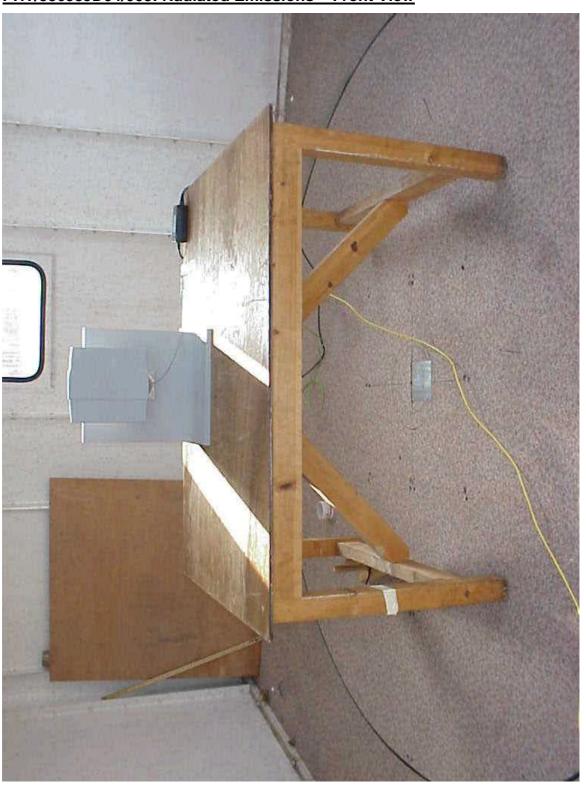
EMC Department

Test Of:

Adaptive Broadband Ltd AB-ACCESS Subscriber Unit (SU)

F.C.C. Part 15 Subpart E: 1998 To:

PHT/38658JD04/003: Radiated Emissions - Front View



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Test Of:

Adaptive Broadband Ltd AB-ACCESS Subscriber Unit (SU)

F.C.C. Part 15 Subpart E: 1998 To:

PHT/38658JD04/004: Radiated Emissions - Rear View

