

*FCC PART 15, SUBPART B and C
TEST REPORT*

for

HEWLETT PACKARD NOTEBOOK
COMPUTER SERIES HSTNN-I01C

MODEL: SERIES HSTNN-I01C

Prepared for

HEWLETT PACKARD COMPANY
20555 SH 249
HOUSTON, TEXAS 77070

Prepared by: _____

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Approved by: _____

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DATE: NOVEMBER 5, 2003

	REPORT BODY	APPENDICES					TOTAL
		A	B	C	D	E	
PAGES	21	2	2	2	17	45	89

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GENERAL REPORT SUMMARY

This electromagnetic emission test report is generated by Compatible Electronics Inc., which is an independent testing and consulting firm. The test report is based on testing performed by Compatible Electronics personnel according to the measurement procedures described in the test specifications given below and in the "Test Procedures" section of this report.

The measurement data and conclusions appearing herein relate only to the sample tested and this report may not be reproduced without the written permission of Compatible Electronics, unless done so in full.

This report must not be used to claim product endorsement by NVLAP, NIST, or any other agency of the U.S. Government.

Device Tested: Hewlett Packard Notebook Computer Series HSTNN-I01C
Model: Series HSTNN-I01C
S/N: BVH205008-02083

Product Description: The product is a wireless miniPCI card used for the Hewlett Packard Notebook Computer Series HSTNN-I01C.

Modifications: The EUT was not modified during the testing.

Manufacturer: Hewlett Packard Company
20555 SH 249
Houston, Texas 77070

Test Dates: October 14, 15 and 17, 2003.

Test Specifications: EMI requirements
Limits: **Class B** of CFR Title 47, Part 15, Subpart B; and Subpart C, sections 15.205, 15.207, 15.209, and 15.247

Test Procedure: ANSI C63.4: 2001

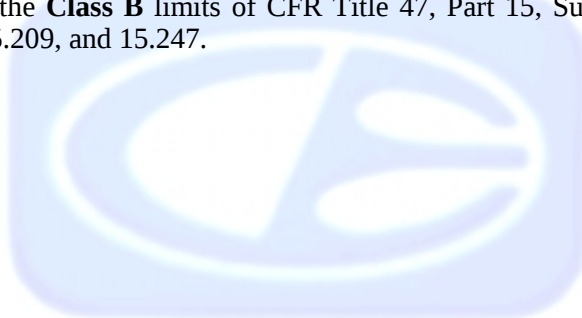
Test Deviations: The test procedure was not deviated from during the testing.

SUMMARY OF TEST RESULTS

TEST	DESCRIPTION	RESULTS
1	Conducted RF Emissions, 150 kHz – 30 MHz	Complies with the Class B limits of CFR Title 47, Part 15, Subpart B; and the limits of CFR Title 47, Part 15, Subpart C, section 15.207
2	Spurious Radiated RF Emissions, 30 MHz – 1000 MHz	Complies with the Class B limits of CFR Title 47, Part 15, Subpart B; and the limits of CFR Title 47, Part 15, Subpart C, section 15.209
3	Spurious Radiated RF Emissions, 10 kHz – 30 MHz and 1000 MHz – 25000 MHz	Complies with the Class B limits of CFR Title 47, Part 15, Subpart B; and CFR Title 47, Part 15, Subpart C, section 15.247(c)
4	Fundamental and Emissions produced by the intentional radiator in non-restricted bands, 10 kHz – 25 GHz	Complies with the relevant requirements of CFR Title 47, Part 15, Subpart C, section 15.247(c)
5	Emissions produced by the intentional radiator in restricted bands, 10 kHz – 25 GHz	Complies with the relevant requirements of CFR Title 47, Part 15, Subpart C, section 15.205, 15.209(a), and section 15.247 (c)
6	6 dB Bandwidth	Complies with the relevant requirements of CFR Title 47, Part 15, Subpart C, section 15.247(a)(2)
7	Peak Power Output	Complies with the relevant requirements of CFR Title 47, Part 15, Subpart C, section 15.247(b)(3)
8	RF Conducted Antenna Test	Complies with the relevant requirements of CFR Title 47, Part 15, Subpart C, section 15.247(c)
9	Peak Power Spectral Density Conducted from the Intentional Radiator to the Antenna	Complies with the relevant requirements of CFR Title 47, Part 15, Subpart C, section 15.247 (d)

1. PURPOSE

This document is a qualification test report based on the Electromagnetic Interference (EMI) tests performed on the Hewlett Packard Notebook Computer Series HSTNN-I01C Model: Series HSTNN-I01C. The EMI measurements were performed according to the measurement procedure described in ANSI C63.4: 2001. The tests were performed in order to determine whether the electromagnetic emissions from the equipment under test, referred to as EUT hereafter, are within the specification limits defined by the **Class B** limits of CFR Title 47, Part 15, Subpart B; and Subpart C, sections 15.205, 15.207, 15.209, and 15.247.



2. ADMINISTRATIVE DATA

2.1 Location of Testing

The EMI tests of the testing described herein were performed at the test facility of Compatible Electronics at the following location:

1) 114 Olinda Drive, Brea, California 92823

2.2 Traceability Statement

The calibration certificates of all test equipment used during the test are on file at the location of the test. The calibration is traceable to the National Institute of Standards and Technology (NIST).

2.3 Cognizant Personnel

Hewlett Packard Company

David Wissel PSG Global Business Units – Mobile Computing

Compatible Electronics, Inc.

Kyle Fujimoto Test Engineer
Scott McCutchan Lab Manager, Brea Division

2.4 Date Test Sample was Received

The test sample was received on October 14, 2003.

2.5 Disposition of the Test Sample

The sample has not been returned to Hewlett Packard Company as of November 5, 2003.

2.6 Abbreviations and Acronyms

The following abbreviations and acronyms may be used in this document.

RF	Radio Frequency
EMI	Electromagnetic Interference
EUT	Equipment Under Test
P/N	Part Number
S/N	Serial Number
HP	Hewlett Packard
ITE	Information Technology Equipment
CML	Corrected Meter Limit
LISN	Line Impedance Stabilization Network

3. APPLICABLE DOCUMENTS

The following documents are referenced or used in the preparation of this EMI Test Report.

SPEC	TITLE
FCC Title 47, Part 15 Subpart C	FCC Rules - Radio frequency devices (including digital devices) – Intentional Radiators
ANSI C63.4 2001	Methods of measurement of radio-noise emissions from low-voltage electrical and electronic equipment in the range of 9 kHz to 40 GHz
FCC Title 47, Part 15 Subpart B	FCC Rules - Radio frequency devices (including digital devices) – Unintentional Radiators

4. DESCRIPTION OF TEST CONFIGURATION

4.1 Description of Test Configuration - EMI

Setup and operation of the equipment under test.

Specifics of the EUT and Peripherals Tested

The Hewlett Packard Notebook Computer Series HSTNN-I01C Model: Series HSTNN-I01C was directly connected to the laptop's miniPCI port underneath. The laptop was also connected to the AC Adapter, modem, and printer via its power, serial, and parallel ports. The EUT was continuously transmitting and receiving. The commands for the EUT were programmed using the special test software provided.

The final radiated as well as the conducted data was taken in the mode above. Please see Appendix E for the data sheets.

4.1.1 Cable Construction and Termination

- Cable 1** This is a 2 meter unshielded cable connecting the laptop to the AC Adapter. It has a 1/8 inch power connector at the laptop end and is hard wired into the laptop.
- Cable 2** This is a 5 foot braid and foil shielded cable connecting the laptop to the modem. It has a D-9 pin metallic connector at the laptop end and a D-25 pin metallic connector at the modem end. The cable was bundled to a length of 1 meter. The shield of the cable was grounded to the chassis via the connectors.
- Cable 3** This is a 5 foot braid and foil shielded cable connecting the laptop to the printer. It has a D-25 pin metallic connector at the laptop end and a Centronics type metallic connector at the printer end. The cable was bundled to a length of 1 meter. The shield of the cable was grounded to the chassis via the connectors.

5. LISTS OF EUT, ACCESSORIES AND TEST EQUIPMENT**5.1 EUT and Accessory List**

EQUIPMENT	MANUFACTURER	MODEL NUMBER	SERIAL NUMBER	FCC ID
Equipment Name				
Hewlett Packard Notebook Computer Series HSTNN-I01C (EUT)	HEWLETT PACKARD COMPANY	SERIES HSTNN-I01C	BVH205008-02083	CNTHSTNN-I01C
EUT Sub-Assemblies				
802.11b MiniPCI Type IIIB Wireless Module	INTEL CORPORATION	WM3B2100	MYI33042VN	CNTHSTNN-I01C
Auxiliary Triple Band Antenna	WISTRON NeWeb CORPORATION	P/N: 6036A0005101	N/A	N/A
Main Triple Band Antenna	WISTRON NeWeb CORPORATION	P/N: 6036A005201	N/A	N/A
Host Equipment List				
AC ADAPTER FOR LAPTOP	COMPAQ COMPUTER CORP.	P/N: 239427-001	N/A	N/A
LAPTOP	HEWLETT PACKARD	PC8966ZAA000	J3817S1057	DoC
MODEM	HAYES	6802US	A05968203117	BFJ9D96802US
PRINTER	CITIZEN	LSP-10	1130060-73	DLK66TLSP-10

5.2 EMI Test Equipment

EQUIPMENT TYPE	MANU-FACTURER	MODEL NUMBER	SERIAL NUMBER	CAL. DATE	CAL. DUE DATE
Radiate Emissions Data Capture Program	Compatible Electronics	2.0	N/A	N/A	N/A
Conducted Emissions Program	Compatible Electronics	2.3 (SR19)	N/A	N/A	N/A
Spectrum Analyzer – Main Section	Hewlett Packard	8566B	3638A08767	June 25, 2003	June 25, 2004
Spectrum Analyzer – Display Section	Hewlett Packard	85662A	3701A22262	June 25, 2003	June 25, 2004
Quasi-Peak Adapter	Hewlett Packard	85650A	2811A01363	June 24, 2003	June 24, 2004
EMI Test Receiver	Rohde & Schwarz	ESIB40	100172	July 22, 2003	July 22, 2004
RF Attenuator	Weinschel Corp.	2	BJ6396	August 7, 2003	Aug. 7, 2004
LISN	Com Power	LI-215	12078	November 20, 2002	Nov. 20, 2003
LISN	Com Power	LI-215	12082	November 20, 2002	Nov. 20, 2003
Preamplifier	Com Power	PA-102	1017	January 2, 2003	Jan. 2, 2004
Biconical Antenna	Com Power	AB-100	1548	October 8, 2003	Oct. 8, 2004
Log Periodic Antenna	Com Power	AL-100	16089	October 8, 2003	Oct. 8, 2004
Antenna Mast	Com Power	AM-100	N/A	N/A	N/A
Turntable	Com Power	TT-100	N/A	N/A	N/A
Computer	Hewlett Packard	4530	US91912319	N/A	N/A
Monitor	Hewlett Packard	D5258A	TW74500641	N/A	N/A
Loop Antenna	Com Power	AL-130	17070	June 19, 2002	June 19, 2004

5.3 EMI Test Equipment (Continued)

EQUIPMENT TYPE	MANU-FACTURER	MODEL NUMBER	SERIAL NUMBER	CAL. DATE	CAL. DUE DATE
Power Meter	Gigatronics	8541C	1836248	January 13, 2003	Jan. 13, 2004
Power Sensor	Gigatronics	80401A	1830892	January 13, 2003	Jan. 13, 2004
Horn Antenna	Antenna Research	DRG-118/A	1053	January 13, 2002	Jan. 13, 2004
Microwave Preamplifier	Com Power	PA-122	25195	August 19, 2003	Aug. 19, 2004
Microwave Preamplifier	Com Power	PA-840	711013	March 6, 2002	March 6, 2004
Horn Antenna	Com Power	AH826	0071957	November 3, 2001	Nov. 3, 2003

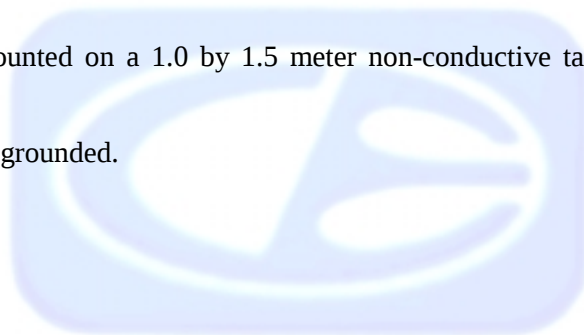
6. TEST SITE DESCRIPTION**6.1 Test Facility Description**

Please refer to section 2.1 and 7.1 of this report for EMI test location.

6.2 EUT Mounting, Bonding and Grounding

The EUT was mounted on a 1.0 by 1.5 meter non-conductive table 0.8 meters above the ground plane.

The EUT was not grounded.



7. CHARACTERISTICS OF THE TRANSMITTER

7.1 Antenna Gain

The 802.11 b antenna has a worst case gain of 2.84 dBi.



8. TEST PROCEDURES

The following sections describe the test methods and the specifications for the tests. Test results are also included in this section.

8.1 RF Emissions

8.1.1 Conducted Emissions Test

The spectrum analyzer was used as a measuring meter. The data was collected with the spectrum analyzer in the peak detect mode with the "Max Hold" feature activated. The quasi-peak was used only where indicated in the data sheets. A 10 dB attenuation pad was used for the protection of the spectrum analyzer input stage, and the offset was adjusted accordingly to read the actual data measured. The LISN output was measured using the spectrum analyzer. The output of the second LISN was terminated by a 50 ohm termination. The effective measurement bandwidth used for this test was 9 kHz.

Please see section 6.2 of this report for mounting, bonding and grounding of the EUT. The EUT was powered through the LISN, which was bonded to the ground plane. The LISN power was filtered and the filter was bonded to the ground plane. The EUT was set up with the minimum distances from any conductive surfaces as specified in ANSI C63.4: 2001. The excess power cord was wrapped in a figure eight pattern to form a bundle not exceeding 0.4 meters in length.

The conducted emissions from the EUT were maximized for operating mode as well as cable placement. The final data was collected under program control by the Compatible Electronics conducted emissions software in several overlapping sweeps by running the spectrum analyzer at a minimum scan rate of 10 seconds per octave. The final qualification data is located in Appendix E.

Test Results:

The EUT complies with the **Class B** limits of CFR Title 47, Part 15, Subpart B; and the limits of CFR Title 47, Part 15, Subpart C, Section 15.207 for conducted emissions.

8.1.2 Radiated Emissions (Spurious and Harmonics) Test

The spectrum analyzer was used as a measuring meter along with the quasi-peak adapter. Amplifiers were used to increase the sensitivity of the instrument. The Com Power Preamplifier Model: PA-102 was used for frequencies from 30 MHz to 1 GHz, the Com-Power Microwave Preamplifier Model: PA-122 was used for frequencies from 1 GHz to 18 GHz, and the Com Power Microwave Preamplifier Model: PA-840 was used for frequencies from 18 GHz to 25 GHz. The spectrum analyzer was used in the peak detect mode with the "Max Hold" feature activated. In this mode, the spectrum analyzer records the highest measured reading over all the sweeps.

The quasi-peak adapter was used only for those readings which are marked accordingly on the data sheets.

The frequencies above 1 GHz were averaged using the EMI Receiver's average detector.

The measurement bandwidths and transducers used for the radiated emissions test were:

FREQUENCY RANGE	EFFECTIVE MEASUREMENT BANDWIDTH	TRANSDUCER
10 kHz to 150 kHz	200 Hz	Active Loop Antenna
150 kHz to 30 MHz	9 kHz	Active Loop Antenna
30 MHz to 300 MHz	120 kHz	Biconical Antenna
300 MHz to 1 GHz	120 kHz	Log Periodic Antenna
1 GHz to 25 GHz	1 MHz	Horn Antenna

The open field test site of Compatible Electronics, Inc. was used for radiated emission testing. This test site is set up according to ANSI C63.4: 2001. Please see section 6.2 of this report for mounting, bonding and grounding of the EUT. The turntable supporting the EUT is remote controlled using a motor. The turntable permits EUT rotation of 360 degrees in order to maximize emissions. Also, the antenna mast allows height variation of the antenna from 1 meter to 4 meters. Data was collected in the worst case (highest emission) configuration of the EUT by the Radiated Emission Manual Test software. At each reading, the EUT was rotated 360 degrees and the antenna height was varied from 1 to 4 meters (for E field radiated field strength). The gunsight method was used when measuring with the horn antenna in order to ensure accurate results.

Radiated Emissions (Spurious and Harmonics) Test (con't)

The presence of ambient signals was verified by turning the EUT off. In case an ambient signal was detected, the measurement bandwidth was reduced temporarily and verification was made that an additional adjacent peak did not exist. This ensures that the ambient signal does not hide any emissions from the EUT. The EUT was tested at a 3 meter test distance to obtain final data.



8.2 6 dB Bandwidth

The 6 dB bandwidth was measured using the EMI Receiver. The bandwidth was measured using a direct connection from the RF out on the EUT. The resolution bandwidth was 100 kHz and the video bandwidth was 300 kHz.

Test Results:

The EUT complies with the relevant requirements of CFR Title 47, Part 15, Subpart C section 15.247 (a)(2).

8.3 Peak Output Power

The Peak Output Power was measured using the power meter and power sensor. The EUT was directly connected to the power sensor, which was directly connected to the power meter. The Peak Output Power was then measured

Test Results:

The EUT complies with the relevant requirements of CFR Title 47, Part 15, Subpart C section 15.247 (b)(3).

8.4 RF Antenna Conducted Test

The RF antenna conducted test was performed using the EMI Receiver. The RF antenna conducted test was measured using a direct connection from the RF out on the EUT into the input of the analyzer. The resolution bandwidth was 100 kHz, and the video bandwidth 300 kHz. The spans were wide enough to include all the harmonics and emissions that were produced by the intentional radiator.

Test Results:

The EUT complies with the relevant requirements of CFR Title 47, Part 15, Subpart C section 15.247 (c).

8.5 Spectral Density Output

The spectral density output was measured using the EMI Receiver. The spectral density output was measured using a direct connection from the RF out on the EUT into the input of the EMI Receiver. The resolution bandwidth was 3 kHz, and the video bandwidth was 10 kHz. The highest 4.5 MHz of the signal was used as the frequency span with the sweep rate being 1 second for every 3 kHz of span.

Test Results:

The EUT complies with the relevant requirements of CFR Title 47, Part 15, Subpart C section 15.247 (d).

8.6 RF Band Edges

The RF band edges were measured at the start of the restricted bands (2390 MHz and 2483.5 MHz). The readings taken were also averaged by the EMI Receiver. Data sheets are included in Appendix E, which compares the reading from the EMI Receiver to the spec limit.

Test Results:

The EUT complies with the relevant requirements of FCC Title 47, Part 15, Subpart C section 15.247 (c). The RF power at the restricted bands closest to the band edges at 2390 MHz and 2483.5 MHz meet the limits of section 15.209. Please see the data sheets located in Appendix E.

9. CONCLUSIONS

The Hewlett Packard Notebook Computer Series HSTNN-I01C Model: Series HSTNN-I01C meets all of the specification limits defined in FCC Title 47, Part 15, Subpart B; and Subpart C, sections 15.205, 15.207, 15.209, and 15.247.



APPENDIX A

LABORATORY RECOGNITIONS

LABORATORY RECOGNITIONS

Compatible Electronics has the following agency accreditations:

National Voluntary Laboratory Accreditation Program - Lab Code: 200528-0

Voluntary Control Council for Interference - Registration Numbers: R-983, C-1026, R-984 and C-1027

Bureau of Standards and Metrology Inspection - Reference Number: SL2-IN-E-1031

Conformity Assessment Body for the EMC Directive Under the US/EU MRA Appointed by NIST

Compatible Electronics is recognized or on file with the following agencies:

Federal Communications Commission

Industry Canada

Radio-Frequency Technologies (Competent Body)

APPENDIX B

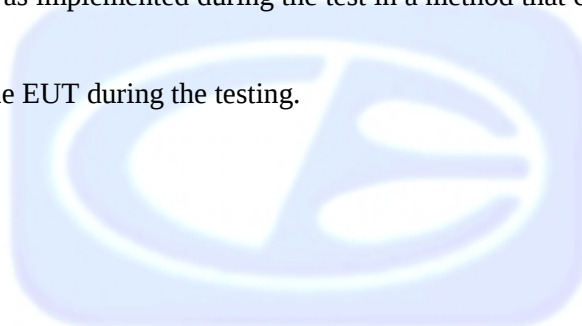
MODIFICATIONS TO THE EUT

MODIFICATIONS TO THE EUT

The modifications listed below were made to the EUT to pass FCC Subpart B and Subpart C specifications.

All the rework described below was implemented during the test in a method that could be reproduced in all the units by the manufacturer.

No modifications were made to the EUT during the testing.



APPENDIX C

***ADDITIONAL MODELS COVERED
UNDER THIS REPORT***

ADDITIONAL MODELS COVERED UNDER THIS REPORT

USED FOR THE PRIMARY TEST

Hewlett Packard Notebook Computer Series HSTNN-I01C
Model: Series HSTNN-I01C
S/N: BVH205008-02083

There were no additional models covered under this report.



APPENDIX D***DIAGRAMS, CHARTS, AND PHOTOS***

FIGURE 1: CONDUCTED EMISSIONS TEST SETUP

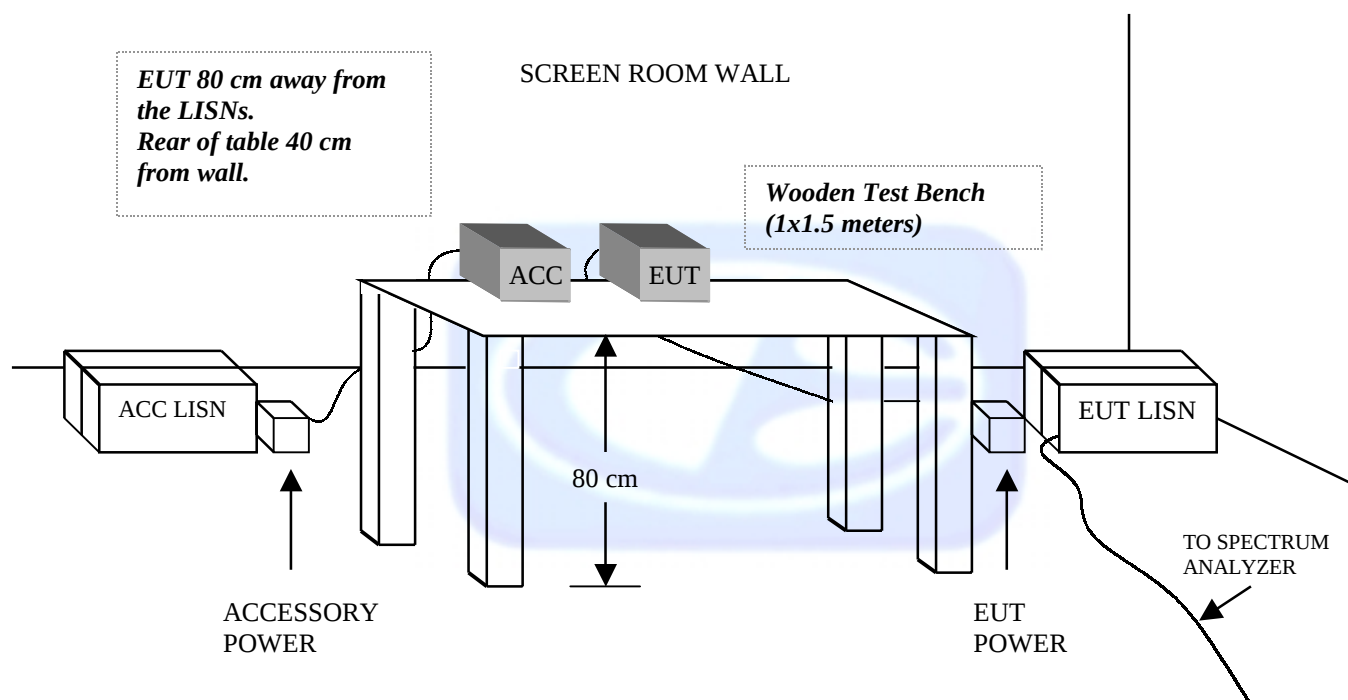
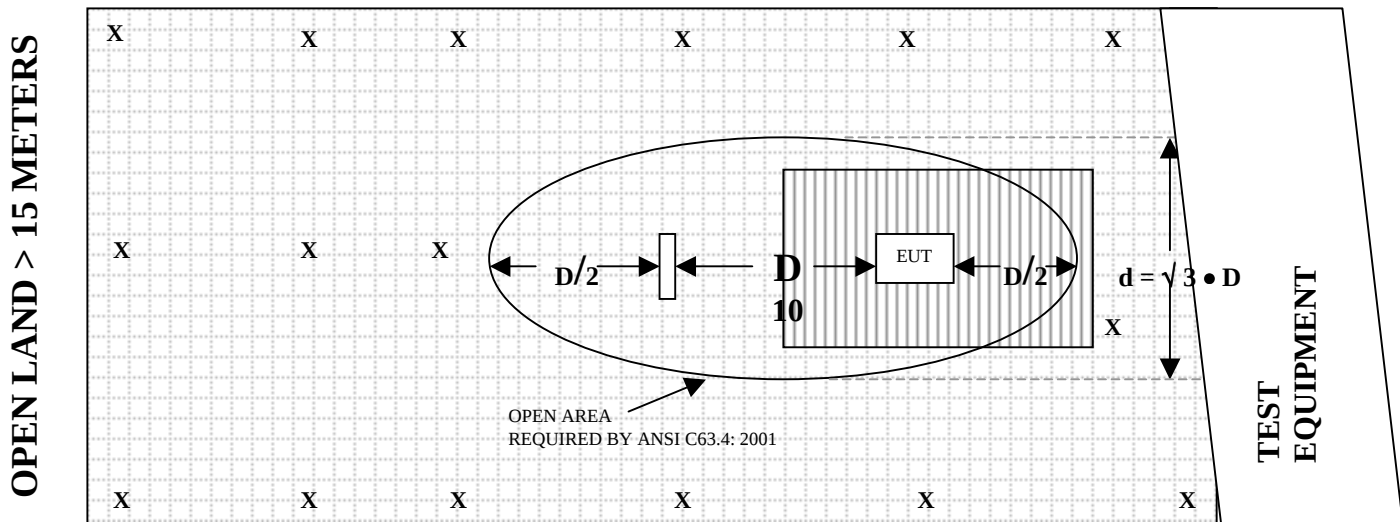


FIGURE 2: PLOT MAP AND LAYOUT OF 3 METER RADIATED SITE

OPEN LAND > 15 METERS



OPEN LAND > 15 METERS

X	= GROUND RODS		= GROUND SCREEN
D	= TEST DISTANCE (meters)		= WOOD COVER



FRONT VIEW

HEWLETT PACKARD COMPANY
HEWLETT PACKARD NOTEBOOK COMPUTER SERIES HSTNN-I01C
MODEL: SERIES HSTNN-I01C
FCC SUBPART C - RADIATED EMISSIONS – 10-15-03

**PHOTOGRAPH SHOWING THE EUT CONFIGURATION
FOR MAXIMUM EMISSIONS**

Brea Division
114 Olinda Drive
Brea, CA 92823
(714) 579-0500

Agoura Division
2337 Troutdale Drive
Agoura, CA 91301
(818) 597-0600

Silverado Division
19121 El Toro Road
Silverado, CA 92676
(949) 589-0700

Lake Forest Division
20621 Pascal Way
Lake Forest, CA 92630
(949) 587-0400



REAR VIEW

HEWLETT PACKARD COMPANY
HEWLETT PACKARD NOTEBOOK COMPUTER SERIES HSTNN-I01C
MODEL: SERIES HSTNN-I01C
FCC SUBPART C - RADIATED EMISSIONS – 10-15-03

**PHOTOGRAPH SHOWING THE EUT CONFIGURATION
FOR MAXIMUM EMISSIONS**

Brea Division
114 Olinda Drive
Brea, CA 92823
(714) 579-0500

Agoura Division
2337 Troutdale Drive
Agoura, CA 91301
(818) 597-0600

Silverado Division
19121 El Toro Road
Silverado, CA 92676
(949) 589-0700

Lake Forest Division
20621 Pascal Way
Lake Forest, CA 92630
(949) 587-0400



FRONT VIEW

HEWLETT PACKARD COMPANY
HEWLETT PACKARD NOTEBOOK COMPUTER SERIES HSTNN-I01C
MODEL: SERIES HSTNN-I01C
EN 55022 CLASS B - RADIATED EMISSIONS – 10-17-03

**PHOTOGRAPH SHOWING THE EUT CONFIGURATION
FOR MAXIMUM EMISSIONS**



REAR VIEW

HEWLETT PACKARD COMPANY
HEWLETT PACKARD NOTEBOOK COMPUTER SERIES HSTNN-I01C
MODEL: SERIES HSTNN-I01C
EN 55022 CLASS B - RADIATED EMISSIONS – 10-17-03

**PHOTOGRAPH SHOWING THE EUT CONFIGURATION
FOR MAXIMUM EMISSIONS**



FRONT VIEW

HEWLETT PACKARD COMPANY
HEWLETT PACKARD NOTEBOOK COMPUTER SERIES HSTNN-I01C
MODEL: SERIES HSTNN-I01C
FCC SUBPART B - CONDUCTED EMISSIONS – 10-15-03

**PHOTOGRAPH SHOWING THE EUT CONFIGURATION
FOR MAXIMUM EMISSIONS**



REAR VIEW

HEWLETT PACKARD COMPANY
HEWLETT PACKARD NOTEBOOK COMPUTER SERIES HSTNN-I01C
MODEL: SERIES HSTNN-I01C
FCC SUBPART B - CONDUCTED EMISSIONS – 10-15-03

**PHOTOGRAPH SHOWING THE EUT CONFIGURATION
FOR MAXIMUM EMISSIONS**

COM-POWER AB-100

BICONICAL ANTENNA

S/N: 1548

CALIBRATION DATE: OCTOBER 8, 2003

FREQUENCY (MHz)	FACTOR (dB)	FREQUENCY (MHz)	FACTOR (dB)
30	13.1	120	9.9
35	12.9	125	11.4
40	14.6	140	12.0
45	12.8	150	13.0
50	12.9	160	13.9
60	9.3	175	14.2
70	8.2	180	14.3
80	8.0	200	14.9
90	8.1	250	16.6
100	8.8	300	19.7

COM-POWER AL-100

LOG PERIODIC ANTENNA

S/N: 16089

CALIBRATION DATE: OCTOBER 8, 2003

FREQUENCY (MHz)	FACTOR (dB)	FREQUENCY (MHz)	FACTOR (dB)
300	12.8	700	20.0
400	14.4	800	21.2
500	16.0	900	20.8
600	17.7	1000	21.7

COM-POWER PA-102**PREAMPLIFIER**

S/N: 1017

CALIBRATION DATE: JANUARY 2, 2003

FREQUENCY (MHz)	FACTOR (dB)	FREQUENCY (MHz)	FACTOR (dB)
30	38.4	300	38.3
40	38.4	350	38.3
50	38.3	400	38.3
60	38.4	450	37.9
70	38.4	500	38.1
80	38.4	550	38.2
90	38.4	600	38.1
100	38.3	650	37.9
125	38.4	700	37.9
150	38.4	750	37.7
175	38.2	800	37.4
200	38.4	850	37.6
225	38.2	900	37.4
250	38.3	950	36.7
275	38.5	1000	37.0

COM-POWER PA-122**MICROWAVE PREAMPLIFIER**

S/N: 25195

CALIBRATION DATE: AUGUST 19, 2003

FREQUENCY (GHz)	FACTOR (dB)	FREQUENCY (GHz)	FACTOR (dB)
1.0	30.8	6.0	33.3
1.1	30.9	6.5	32.7
1.2	30.9	7.0	31.8
1.3	30.4	7.5	31.6
1.4	30.7	8.0	30.3
1.5	31.0	8.5	29.0
1.6	31.2	9.0	29.0
1.7	30.3	9.5	29.5
1.8	28.9	10.0	30.9
1.9	31.2	11.0	30.2
2.0	30.9	12.0	28.7
2.5	30.4	13.0	30.3
3.0	31.7	14.0	28.7
3.5	32.6	15.0	29.5
4.0	32.6	16.0	31.1
4.5	32.2	17.0	30.1
5.0	31.1	18.0	28.6
5.5	30.6		

COM-POWER PA-840

MICROWAVE PREAMPLIFIER

S/N: 711013

CALIBRATION DATE: MARCH 06, 2002

FREQUENCY (GHz)	FACTOR (dB)	FREQUENCY (GHz)	FACTOR (dB)
18.0	26.4	30.0	27.6
19.0	25.4	31.0	27.3
20.0	24.5	32.0	26.9
21.0	23.9	33.0	26.7
22.0	24.0	34.0	27.0
23.0	24.4	35.0	25.9
24.0	25.2	36.0	25.5
25.0	26.1	37.0	26.2
26.0	26.6	38.0	25.6
27.0	27.2	39.0	23.4
28.0	27.4	40.0	24.3
29.0	27.5		

ANTENNA RESEARCH DRG-118/A**HORN ANTENNA**

S/N: 1053

CALIBRATION DATE: JANUARY 13, 2002

FREQUENCY (GHz)	FACTOR (dB)	FREQUENCY (GHz)	FACTOR (dB)
1.0	25.5	9.5	39.1
1.5	26.6	10.0	39.7
2.0	29.4	10.5	40.9
2.5	30.4	11.0	40.7
3.0	31.2	11.5	42.4
3.5	32.3	12.0	42.6
4.0	32.9	12.5	42.4
4.5	33.0	13.0	41.5
5.0	34.8	13.5	41.0
5.5	35.2	14.0	40.5
6.0	36.4	14.5	43.6
6.5	36.6	15.0	43.7
7.0	38.8	15.5	43.3
7.5	38.8	16.0	42.8
8.0	38.0	16.5	43.0
8.5	38.1	17.0	42.7
9.0	39.9	17.5	44.0
		18.0	41.8

COM-POWER AH826

HORN ANTENNA

S/N: 0071957

CALIBRATION DATE: NOVEMBER 03, 2001

FREQUENCY (GHz)	FACTOR (dB)	FREQUENCY (GHz)	FACTOR (dB)
18.0	32.3	22.5	32.5
18.5	32.2	23.0	32.1
19.0	32.3	23.5	32.3
19.5	31.9	24.0	32.3
20.0	32.0	24.5	32.9
20.5	32.3	25.0	33.1
21.0	32.0	25.5	32.9
21.5	32.3	26.0	33.4
22.0	32.5	26.5	33.0

COM-POWER AL-130**LOOP ANTENNA****S/N: 17070****CALIBRATION DATE: JUNE 19, 2002**

FREQUENCY (MHz)	MAGNETIC (dB/m)	ELECTRIC (dB/m)
0.009	-40.4	11.1
0.01	-40.3	11.2
0.02	-41.2	10.3
0.05	-41.6	9.9
0.07	-41.4	10.1
0.1	-41.7	9.8
0.2	-44.0	7.5
0.3	-41.6	9.9
0.5	-41.3	10.2
0.7	-41.4	10.1
1	-40.9	10.6
2	-40.6	10.9
3	-40.5	11.0
4	-40.8	10.7
5	-40.2	11.3
10	-40.7	10.8
15	-41.4	10.1
20	-41.6	9.9
25	-41.7	9.8
30	-42.9	8.6

APPENDIX E

DATA SHEETS

RADIATED EMISSIONS

DATA SHEETS

RADIATED EMISSIONS (FCC SECTION 15.205 AND 15.247)

COMPANY	Hewlett Packard Company	DATE	10/15/03
EUT	Hewlett Packard Notebook Computer Series HSTNN-I01C	DUTY CYCLE	N/A %
MODEL	Series HSTNN-I01C	PEAK TO AVG	N/A dB
S/N	TBD	TEST DIST.	3 Meters
TEST ENGINEER	Kyle Fujimoto	LAB	B

Frequency MHz	Peak Reading (dBuV)	Average (A) or Quasi- Peak (QP)	Antenna Polar. (V or H)	Antenna Height (meters)	EUT Azimuth (degrees)	EUT Axis (X,Y,Z)	EUT Tx Channel	Antenna Factor (dB)	Cable Loss (dB)	Amplifier Gain (dB)	Distance Factor (dB)	Mixer Factor (dB)	*Corrected Reading (dBuV/m)	Delta ** (dB)	Spec Limit (dBuV/m)	Comments
2412.0000	78.9	A	H	1.0	90		LOW	30.2	2.5	0.0	0.0	0.0	111.7			
2412.0000	75.9	A	V	2.0	90		LOW	30.2	2.5	0.0	0.0	0.0	108.7			
2437.0000	78.5	A	H	1.0	270		MID	30.3	2.5	0.0	0.0	0.0	111.3			
2437.0000	75.8	A	V	1.0	0		MID	30.3	2.5	0.0	0.0	0.0	108.7			
2462.0000	78.1	A	H	2.0	0		HIGH	30.3	2.6	0.0	0.0	0.0	111.0			
2462.0000	75.9	A	V	2.0	90		HIGH	30.3	2.6	0.0	0.0	0.0	108.8			

* CORRECTED READING = METER READING + ANTENNA FACTOR + CABLE LOSS - AMPLIFIER GAIN
 ** DELTA = SPEC LIMIT - CORRECTED READING

PAGE 1 of PAGE 3

RADIATED EMISSIONS (FCC SECTION 15.205 AND 15.247)

COMPANY	Hewlett Packard Company	DATE	10/15/03
EUT	Hewlett Packard Notebook Computer Series HSTNN-I01C	DUTY CYCLE	N/A %
MODEL	Series HSTNN-I01C	PEAK TO AVG	N/A dB
S/N	TBD	TEST DIST.	3 Meters
TEST ENGINEER	Kyle Fujimoto	LAB	B

Frequency MHz	Peak Reading (dBuV)	Average (A) or Quasi- Peak (QP)	Antenna Polar. (V or H)	Antenna Height (meters)	EUT Azimuth (degrees)	EUT Axis (X,Y,Z)	EUT Tx Channel	Antenna Factor (dB)	Cable Loss (dB)	Amplifier Gain (dB)	Distance Factor (dB)	Mixer Factor (dB)	*Corrected Reading (dBuV/m)	Delta ** (dB)	Spec Limit (dBuV/m)	Comments
4824.0000	33.5	26.9 A	H	1.0	90	Y	LOW	35.1	3.8	29.8	0.0	0.0	36.0	-18.0	54.0	
4824.0000	32.6	26.5 A	V	1.0	90	Y	LOW	35.1	3.8	29.8	0.0	0.0	35.6	-18.4	54.0	
4874.0000	33.4	27.0 A	H	1.0	90	Y	MID	35.3	3.8	31.4	0.0	0.0	34.7	-19.3	54.0	
4874.0000	32.9	26.5 A	V	2.0	90	Y	MID	35.3	3.8	31.4	0.0	0.0	34.2	-19.8	54.0	
4924.0000	33.1	27.5 A	H	1.5	0	Y	HIGH	35.4	3.8	31.3	0.0	0.0	35.5	-18.5	54.0	
4924.0000	33.0	27.3 A	V	2.0	0	Y	HIGH	35.4	3.8	31.3	0.0	0.0	35.3	-18.7	54.0	

* CORRECTED READING = METER READING + ANTENNA FACTOR + CABLE LOSS - AMPLIFIER GAIN
 ** DELTA = SPEC LIMIT - CORRECTED READING

PAGE 2 of PAGE 3

RADIATED EMISSIONS (FCC SECTION 15.205 AND 15.247)

COMPANY	Hewlett Packard Company	DATE	10/15/03
EUT	Hewlett Packard Notebook Computer Series HSTNN-I01C	DUTY CYCLE	N/A %
MODEL	Series HSTNN-I01C	PEAK TO AVG	N/A dB
S/N	TBD	TEST DIST.	3 Meters
TEST ENGINEER	Kyle Fujimoto	LAB	B

Frequency MHz	Peak Reading (dBuV)	Average (A) or Quasi- Peak (QP)	Antenna Polar. (V or H)	Antenna Height (meters)	EUT Azimuth (degrees)	EUT Axis (X,Y,Z)	EUT Tx Channel	Antenna Factor (dB)	Cable Loss (dB)	Amplifier Gain (dB)	Distance Factor (dB)	Mixer Factor (dB)	*Corrected Reading (dBuV/m)	Delta ** (dB)	Spec Limit (dBuV/m)	Comments
7236.0000	34.5	25.1 A	H	1.5	90	Y	LOW	40.5	4.8	31.7	0.0	0.0	38.8	-15.2	54.0	No Harmonics
																Nor Emissions Found
																After the 3rd Harmonic
7236.0000	33.5	25.2 A	V	2.0	90	Y	LOW	40.5	4.8	31.7	0.0	0.0	38.9	-15.1	54.0	
7311.0000	34.4	24.9 A	H	1.5	90	Y	MID	40.7	4.9	31.7	0.0	0.0	38.7	-15.3	54.0	
7311.0000	33.5	23.9 A	V	1.5	90	Y	MID	40.7	4.9	31.7	0.0	0.0	37.8	-16.2	54.0	
7386.0000	33.9	25.1 A	H	1.5	0	Y	HIGH	40.8	4.9	31.6	0.0	0.0	39.1	-14.9	54.0	
7386.0000	33.5	24.8 A	V	1.5	0	Y	HIGH	40.8	4.9	31.6	0.0	0.0	38.8	-15.2	54.0	

* CORRECTED READING = METER READING + ANTENNA FACTOR + CABLE LOSS - AMPLIFIER GAIN

** DELTA = SPEC LIMIT - CORRECTED READING

PAGE 3 of PAGE 3

RADIATED EMISSIONS (FCC SECTION 15.205 AND 15.247)

COMPANY	Hewlett Packard Company	DATE	10/15/03
EUT	Hewlett Packard Notebook Computer Series HSTNN-I01C	DUTY CYCLE	N/A %
MODEL	Series HSTNN-I01C	PEAK TO AVG	N/A dB
S/N	TBD	TEST DIST.	3 Meters
TEST ENGINEER	Kyle Fujimoto	LAB	B

Frequency MHz	Peak Reading (dBuV)	Average (A) or Quasi- Peak (QP)	Antenna Polar. (V or H)	Antenna Height (meters)	EUT Azimuth (degrees)	EUT Axis (X,Y,Z)	EUT Tx Channel	Antenna Factor (dB)	Cable Loss (dB)	Amplifier Gain (dB)	Distance Factor (dB)	Mixer Factor (dB)	*Corrected Reading (dBuV/m)	Delta ** (dB)	Spec Limit (dBuV/m)	Comments
1599.6000	50.8	47.1 A	V	1.0	90			27.2	2.3	31.2	0.0	0.0	45.4	-8.6	54.0	Digital Spurious
1599.6000	41.6	35.2 A	H	2.0	90			27.2	2.3	31.2	0.0	0.0	33.5	-20.5	54.0	Digital Spurious
																No Harmonic Emissions
																Found in the Receive Mode

* CORRECTED READING = METER READING + ANTENNA FACTOR + CABLE LOSS - AMPLIFIER GAIN
 ** DELTA = SPEC LIMIT - CORRECTED READING

Test Location : Compatible Electronics **Page** : 1/1
Customer : Hewlett Packard Company **Date** : 10/17/2003
Manufacturer : Hewlett Packard Company **Time** : 8:12:49
Eut name : HP Notebook Computer Series HSTNN-I01C **Lab** : D
Model : Series HSTNN-I01C **Test Distance** : 3.0 Meters
Serial # : BVH205008-02083
Specification : FCC Class B
Distance correction factor (20 * log(test/spec)) : 0.00
Test Mode : Radiated Spurious Emissions
 Vertical Polarization 10 kHz to 1000 MHz
 Temperature 67 Degrees F., Relative Humidity 54%
 Tested By: Kyle Fujimoto

Pol	Freq MHz	Rdng dBuV	Cable loss dB	Ant factor dB	Amp gain dB	Cor'd rdg = R dBuV	Limit = L dBuV/m	Delta R-L dB
1V	39.778	48.60	1.00	14.53	38.40	25.73	40.00	-14.27
2V	61.320	53.00	1.43	9.14	38.40	25.17	40.00	-14.83
3V	79.945	57.10	1.70	8.00	38.40	28.40	40.00	-11.60
4V	116.827	49.30	1.97	9.74	38.37	22.64	43.50	-20.86
5V	130.380	51.40	2.05	11.62	38.40	26.67	43.50	-16.83
6V	144.088	46.90	2.16	12.42	38.40	23.07	43.50	-20.43
7V	165.864	49.00	2.46	14.02	38.27	27.21	43.50	-16.29
8V	220.088	49.70	2.66	15.63	38.24	29.75	46.00	-16.25
9V	232.193	50.20	2.79	16.04	38.23	30.80	46.00	-15.20
10V	240.078	43.90	2.88	16.29	38.26	24.81	46.00	-21.19
11V	299.812	47.00	3.30	19.69	38.30	31.69	46.00	-14.31
12V	308.087	62.80	3.35	12.95	38.30	40.80	46.00	-5.20
13V	315.088	45.20	3.40	13.07	38.30	23.37	46.00	-22.63
14V	320.084	55.50	3.43	13.16	38.30	33.79	46.00	-12.21
15V	325.834	53.30	3.46	13.26	38.30	31.72	46.00	-14.28
16V	330.090	56.10	3.49	13.33	38.30	34.62	46.00	-11.38
17V	331.558	49.00	3.49	13.36	38.30	27.55	46.00	-18.45
18V	336.086	52.80	3.52	13.43	38.30	31.45	46.00	-14.55
19V	352.066	63.40	3.61	13.69	38.30	42.40	46.00	-3.60
20V	360.039	49.80	3.64	13.81	38.30	28.96	46.00	-17.04
21V	365.679	50.30	3.67	13.90	38.30	29.57	46.00	-16.43
22V	396.067	46.20	3.79	14.35	38.30	26.03	46.00	-19.97
23V	432.301	47.50	3.93	14.96	38.04	28.35	46.00	-17.65
24V	616.095	43.40	4.70	18.09	38.03	28.16	46.00	-17.84
25V	632.350	45.80	4.80	18.48	37.97	31.11	46.00	-14.89
26V	912.239	42.70	5.67	20.92	37.23	32.07	46.00	-13.93
27V	999.159	41.50	2.06	21.69	37.00	28.26	54.00	-25.74

Test Location : Compatible Electronics **Page** : 1/1
Customer : Hewlett Packard Company **Date** : 10/17/2003
Manufacturer : Hewlett Packard Company **Time** : 9:08:39
Eut name : HP Notebook Computer Series HSTNN-I01C **Lab** : D
Model : Series HSTNN-I01C **Test Distance** : 3.0 Meters
Serial # : BVH205008-02083
Specification : FCC Class B
Distance correction factor (20 * log(test/spec)) : 0.00
Test Mode : Radiated Spurious Emissions
Horizontal Polarization 10 kHz to 1000 MHz
Temperature 67 Degrees F., Relative Humidity 54%
Tested By: Kyle Fujimoto

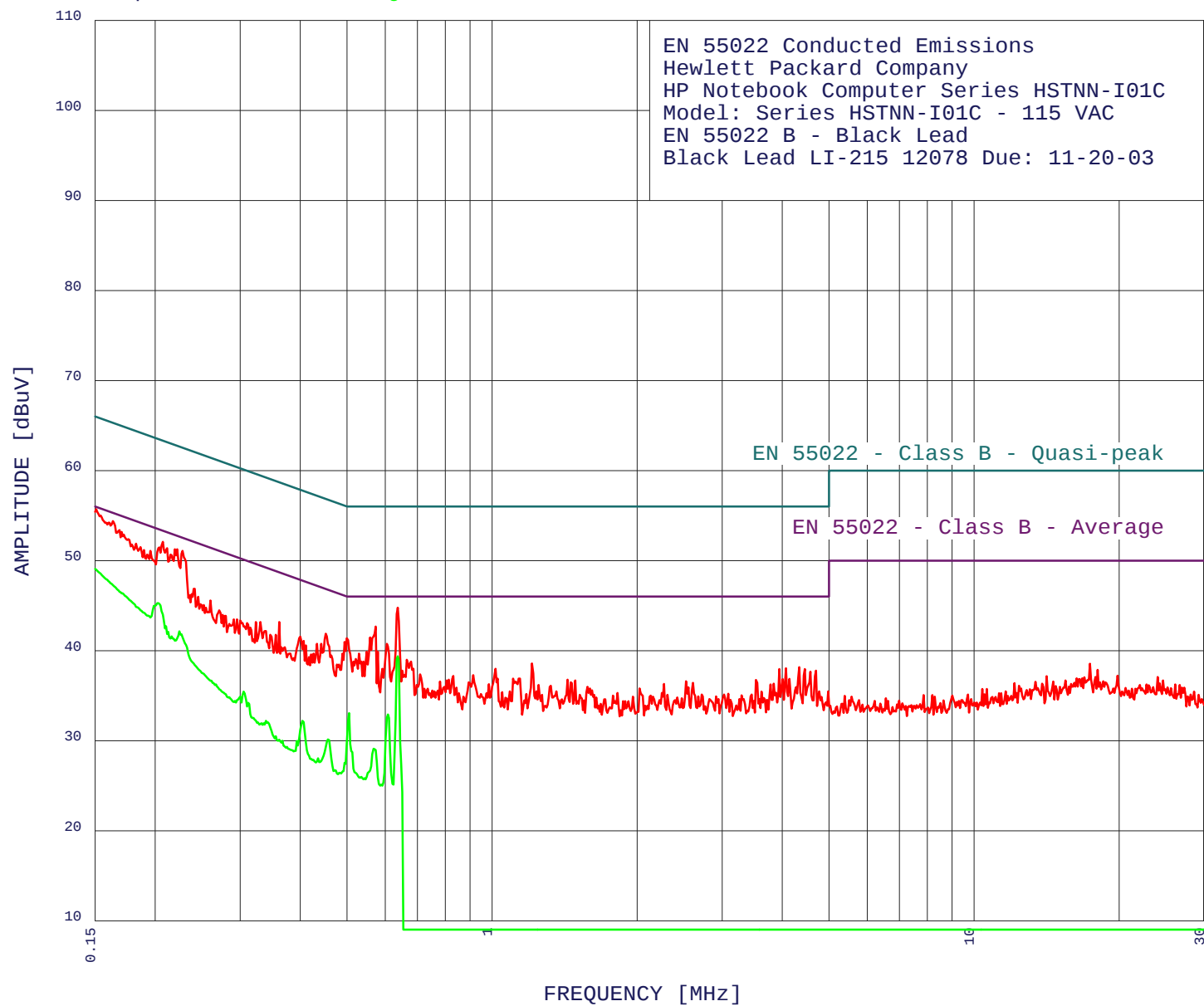
Pol	Freq MHz	Rdng dBuV	Cable loss dB	Ant factor dB	Amp gain dB	Cor'd rdg = R dBuV	Limit = L dBuV/m	Delta R-L dB
1H	79.946	46.70	1.70	8.00	38.40	18.00	40.00	-22.00
2H	124.480	61.40	2.00	11.25	38.40	36.25	43.50	-7.25
3H	142.720	54.80	2.15	12.28	38.40	30.82	43.50	-12.68
4H	165.978	46.70	2.46	14.02	38.27	24.92	43.50	-18.58
5H	232.986	49.60	2.80	16.06	38.23	30.23	46.00	-15.77
6H	308.054	55.10	3.35	12.95	38.30	33.10	46.00	-12.90
7H	325.803	52.10	3.46	13.26	38.30	30.52	46.00	-15.48
8H	330.057	50.60	3.49	13.33	38.30	29.12	46.00	-16.88
9H	331.637	52.60	3.50	13.36	38.30	31.15	46.00	-14.85
10H	352.073	56.80	3.61	13.69	38.30	35.80	46.00	-10.20
11H	352.077	61.50	3.61	13.69	38.30	40.50	46.00	-5.50
12H	360.081	45.20	3.64	13.82	38.30	24.36	46.00	-21.64
13H	381.416	49.90	3.73	14.14	38.30	29.46	46.00	-16.54
14H	390.989	51.30	3.77	14.27	38.30	31.04	46.00	-14.96
15H	432.147	50.30	3.93	14.95	38.04	31.15	46.00	-14.85
16H	559.992	39.90	4.44	17.06	38.18	23.22	46.00	-22.78
17H	565.760	43.50	4.46	17.15	38.17	26.95	46.00	-19.05
18H	698.670	41.80	5.09	19.97	37.90	28.97	46.00	-17.03
19H	763.230	38.30	5.18	20.78	37.62	26.64	46.00	-19.36

CONDUCTED EMISSIONS

DATA SHEETS

EMISSION LEVEL [dBuV] PEAK
Graph for Peak & Average

10/17/2003 10:35:16



10/17/2003

10:35:16

EN 55022 Conducted Emissions
Hewlett Packard Company
HP Notebook Computer Series HSTNN-I01C
Model: Series HSTNN-I01C - 115 VAC
EN 55022 B - Black Lead
Black Lead LI-215 12078 Due: 11-20-03
TEST ENGINEER : Kyle Fujimoto

45 highest peaks above -50.00 dB of EN 55022 - Class B - Average limit line

Peak criteria : 1.00 dB, Curve : Peak

Peak#	Freq(MHz)	Amp(dBuV)	Limit(dB)	Delta(dB)
1	0.637	44.77	46.00	-1.23**
2	0.207	52.07	53.31	-1.24**
3	0.228	51.06	52.52	-1.46**
4	0.220	51.27	52.83	-1.56**
5	0.573	42.67	46.00	-3.33**
6	0.558	41.47	46.00	-4.53**
7	0.500	41.36	46.01	-4.64**
8	0.452	41.86	46.85	-4.98**
9	0.242	46.86	52.04	-5.18**
10	0.605	40.77	46.00	-5.23**
11	0.362	43.16	48.69	-5.53**
12	0.260	45.56	51.42	-5.86**
13	0.246	45.96	51.90	-5.94**
14	0.580	39.87	46.00	-6.13**
15	0.550	39.87	46.00	-6.13**
16	0.331	43.16	49.44	-6.28**
17	0.400	41.56	47.86	-6.29**
18	0.530	39.67	46.00	-6.33**
19	0.433	40.76	47.19	-6.43**
20	0.324	43.16	49.62	-6.45**
21	0.272	44.46	51.07	-6.61**
22	0.300	43.36	50.23	-6.87**
23	0.296	43.46	50.36	-6.90**
24	0.521	39.07	46.00	-6.93**
25	0.280	43.86	50.81	-6.94**
26	0.665	38.97	46.00	-7.03
27	0.291	43.46	50.49	-7.03**
28	0.356	41.76	48.82	-7.06**
29	0.411	40.56	47.63	-7.07**
30	0.541	38.77	46.00	-7.23**
31	0.347	41.76	49.04	-7.28**
32	1.210	38.58	46.00	-7.42
33	4.339	38.15	46.00	-7.85
34	4.071	38.04	46.00	-7.96
35	1.016	37.97	46.00	-8.03
36	4.456	37.95	46.00	-8.05
37	3.945	37.94	46.00	-8.06
38	4.696	37.76	46.00	-8.24
39	4.576	37.66	46.00	-8.34
40	0.709	37.37	46.00	-8.63
41	0.914	37.27	46.00	-8.73
42	0.831	37.17	46.00	-8.83
43	1.142	36.88	46.00	-9.12
44	4.137	36.84	46.00	-9.16
45	4.008	36.84	46.00	-9.16

10/17/2003

10:35:16

EN 55022 Conducted Emissions
Hewlett Packard Company
HP Notebook Computer Series HSTNN-I01C
Model: Series HSTNN-I01C - 115 VAC
EN 55022 B - Black Lead
Black Lead LI-215 12078 Due: 11-20-03
TEST ENGINEER : Kyle Fujimoto

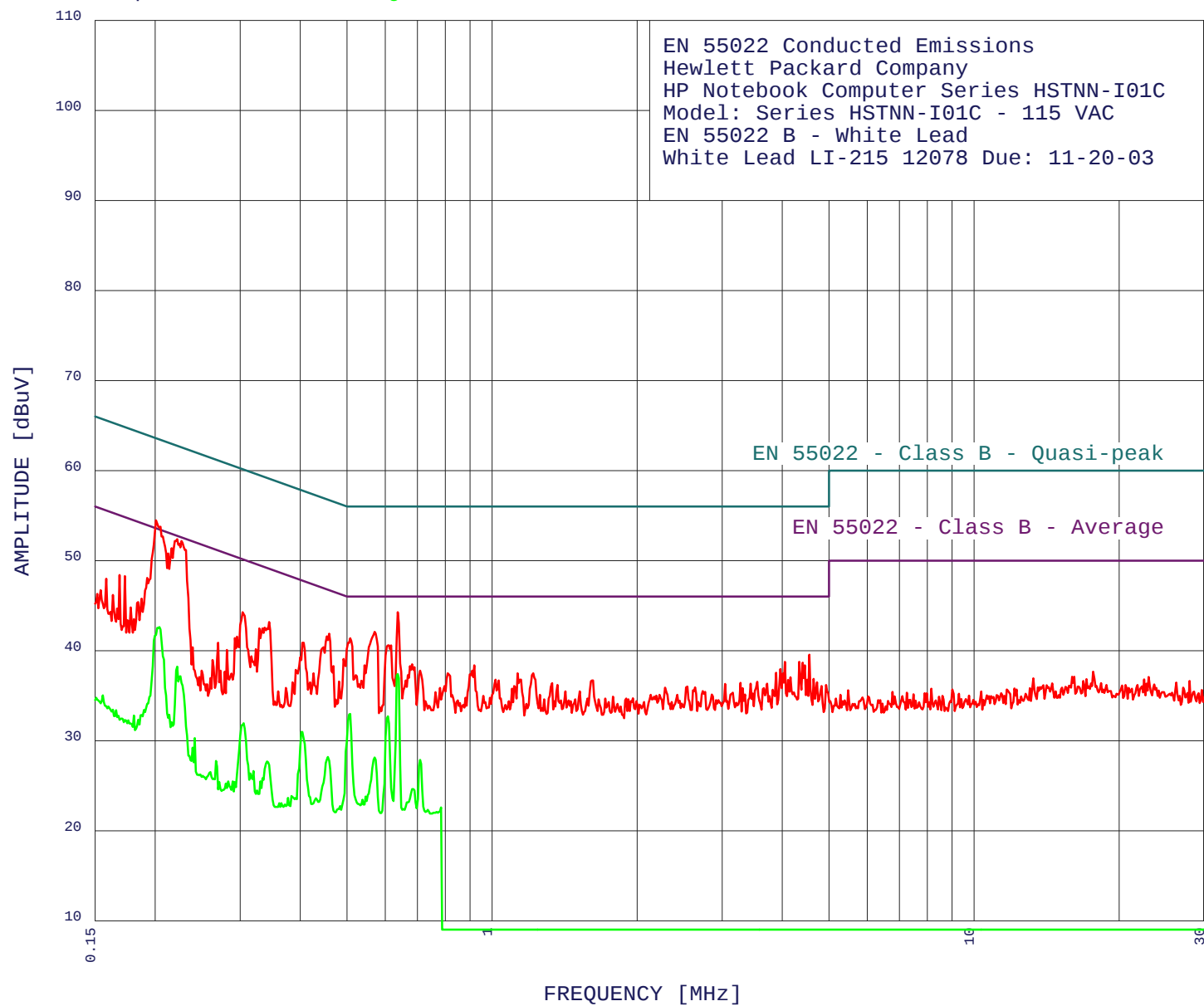
28 highest peaks above -50.00 dB of EN 55022 - Class B - Average limit line

Peak criteria : 0.10 dB, Curve : Average

Peak#	Freq(MHz)	Amp(dBuV)	Limit(dB)	Delta(dB)
1	0.637	39.37	46.00	-6.63
2	0.203	45.27	53.49	-8.21
3	0.211	42.70	53.18	-10.48
4	0.224	42.12	52.65	-10.53
5	0.213	42.08	53.09	-11.02
6	0.216	41.57	52.96	-11.39
7	0.505	33.04	46.00	-12.96
8	0.608	32.90	46.00	-13.10
9	0.305	35.43	50.10	-14.67
10	0.300	34.87	50.23	-15.36
11	0.404	32.19	47.77	-15.57
12	0.312	34.19	49.92	-15.73
13	0.293	34.42	50.45	-16.03
14	0.457	30.12	46.76	-16.63
15	0.567	29.11	46.00	-16.89
16	0.339	32.19	49.22	-17.03
17	0.336	31.94	49.31	-17.36
18	0.332	31.92	49.39	-17.47
19	0.393	29.95	47.99	-18.04
20	0.356	30.49	48.82	-18.33
21	0.494	27.54	46.09	-18.55
22	0.367	29.98	48.56	-18.58
23	0.362	30.09	48.69	-18.60
24	0.435	28.04	47.15	-19.11
25	0.471	26.72	46.49	-19.77
26	0.535	25.99	46.00	-20.01
27	0.544	25.82	46.00	-20.18
28	0.589	25.12	46.00	-20.88

EMISSION LEVEL [dBuV] PEAK
Graph for Peak & Average

10/17/2003 10:39:03



10/17/2003

10:39:03

EN 55022 Conducted Emissions
Hewlett Packard Company
HP Notebook Computer Series HSTNN-I01C
Model: Series HSTNN-I01C - 115 VAC
EN 55022 B - White Lead
White Lead LI-215 12078 Due: 11-20-03
TEST ENGINEER : Kyle Fujimoto

45 highest peaks above -50.00 dB of EN 55022 - Class B - Average limit line

Peak criteria : 1.00 dB, Curve : Peak

Peak#	Freq(MHz)	Amp(dBuV)	Limit(dB)	Delta(dB)
1	0.201	54.47	53.58	0.90**
2	0.222	52.37	52.74	-0.37**
3	0.216	51.37	52.96	-1.59**
4	0.637	44.27	46.00	-1.73**
5	0.213	50.77	53.09	-2.33**
6	0.570	42.07	46.00	-3.93**
7	0.508	41.36	46.00	-4.64**
8	0.459	41.86	46.71	-4.85**
9	0.618	40.57	46.00	-5.43**
10	0.304	44.26	50.14	-5.88**
11	0.345	43.16	49.09	-5.93**
12	4.552	39.56	46.00	-6.44
13	0.173	48.28	54.81	-6.53**
14	0.169	48.39	55.03	-6.64**
15	0.406	40.86	47.72	-6.86**
16	0.329	42.46	49.48	-7.02**
17	4.339	38.75	46.00	-7.25
18	4.050	38.74	46.00	-7.26
19	4.408	38.65	46.00	-7.35
20	0.683	38.47	46.00	-7.53**
21	0.158	47.99	55.56	-7.57**
22	0.919	38.37	46.00	-7.63
23	4.456	38.35	46.00	-7.65
24	3.966	37.94	46.00	-8.06
25	0.709	37.77	46.00	-8.23**
26	0.187	45.78	54.15	-8.37**
27	3.882	37.54	46.00	-8.46
28	1.217	37.48	46.00	-8.52
29	1.130	37.48	46.00	-8.52
30	0.809	37.47	46.00	-8.53
31	0.296	41.56	50.36	-8.80**
32	0.184	45.38	54.28	-8.90**
33	4.159	37.04	46.00	-8.96
34	0.154	46.70	55.78	-9.08**
35	0.293	41.36	50.45	-9.09**
36	0.163	46.19	55.29	-9.10**
37	4.648	36.86	46.00	-9.14
38	1.016	36.77	46.00	-9.23
39	4.504	36.76	46.00	-9.24
40	4.114	36.74	46.00	-9.26
41	1.620	36.68	46.00	-9.32
42	1.032	36.67	46.00	-9.33
43	0.324	40.16	49.62	-9.45**
44	3.547	36.53	46.00	-9.47
45	4.722	36.46	46.00	-9.54

10/17/2003

10:39:03

EN 55022 Conducted Emissions
Hewlett Packard Company
HP Notebook Computer Series HSTNN-I01C
Model: Series HSTNN-I01C - 115 VAC
EN 55022 B - White Lead
White Lead LI-215 12078 Due: 11-20-03
TEST ENGINEER : Kyle Fujimoto

45 highest peaks above -50.00 dB of EN 55022 - Class B - Average limit line

Peak criteria : 0.10 dB, Curve : Average

Peak#	Freq(MHz)	Amp(dBuV)	Limit(dB)	Delta(dB)
1	0.637	37.38	46.00	-8.62
2	0.204	42.62	53.44	-10.82
3	0.508	32.97	46.00	-13.03
4	0.608	32.70	46.00	-13.30
5	0.222	38.22	52.74	-14.52
6	0.226	37.15	52.61	-15.46
7	0.404	30.97	47.77	-16.79
8	0.570	28.13	46.00	-17.87
9	0.709	27.87	46.00	-18.13
10	0.305	31.94	50.10	-18.16
11	0.457	28.17	46.76	-18.58
12	0.214	32.88	53.05	-20.17
13	0.189	33.42	54.06	-20.64
14	0.156	35.02	55.69	-20.66
15	0.216	32.04	52.96	-20.92
16	0.151	34.77	55.95	-21.18
17	0.187	32.84	54.15	-21.31
18	0.686	24.61	46.00	-21.39
19	0.341	27.68	49.18	-21.50
20	0.181	32.79	54.46	-21.66
21	0.160	33.80	55.47	-21.67
22	0.242	30.29	52.04	-21.75
23	0.166	33.38	55.16	-21.78
24	0.163	33.43	55.29	-21.86
25	0.184	32.32	54.28	-21.96
26	0.547	23.80	46.00	-22.20
27	0.168	32.77	55.07	-22.30
28	0.176	32.24	54.68	-22.43
29	0.170	32.46	54.94	-22.49
30	0.173	32.29	54.81	-22.52
31	0.538	23.43	46.00	-22.57
32	0.239	29.22	52.12	-22.90
33	0.320	26.62	49.71	-23.09
34	0.783	22.57	46.00	-23.43
35	0.267	27.73	51.20	-23.47
36	0.315	26.36	49.84	-23.47
37	0.334	25.81	49.35	-23.54
38	0.484	22.73	46.27	-23.54
39	0.431	23.57	47.24	-23.66
40	0.735	22.33	46.00	-23.67
41	0.331	25.47	49.44	-23.97
42	0.383	23.86	48.21	-24.34
43	0.391	23.64	48.03	-24.39
44	0.377	23.64	48.34	-24.70
45	0.260	26.51	51.42	-24.91

-6 dB BANDWIDTH

DATA SHEETS



Delta 1 [T2]

RBW 100 kHz RF Att 40 dB

Ref Lvl -0.51 dB

VBW 300 kHz

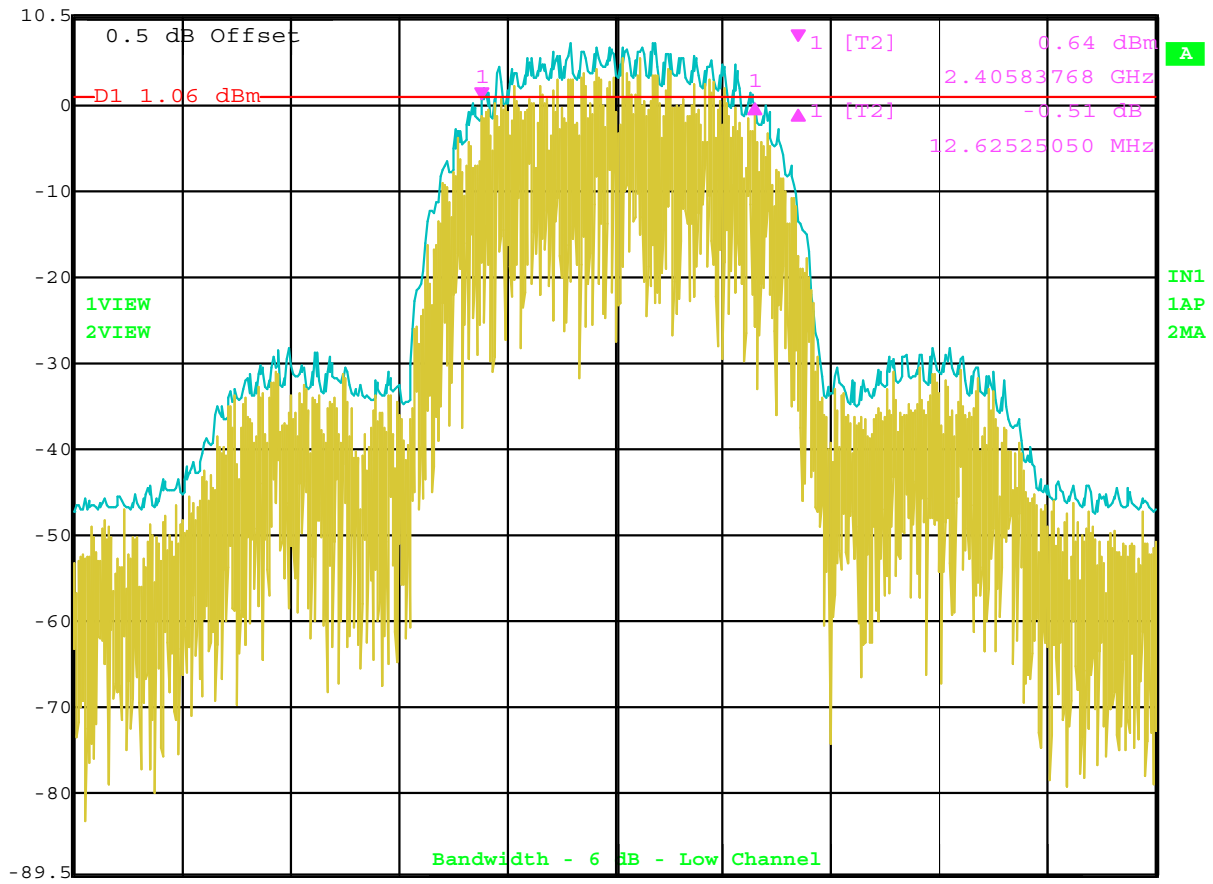
10.5 dBm

12.62525050 MHz

SWT 12.5 ms

Unit

dBm



Center 2.412 GHz

5 MHz/

Span 50 MHz

Date: 15.OCT.2003 01:19:50



Delta 1 [T2]

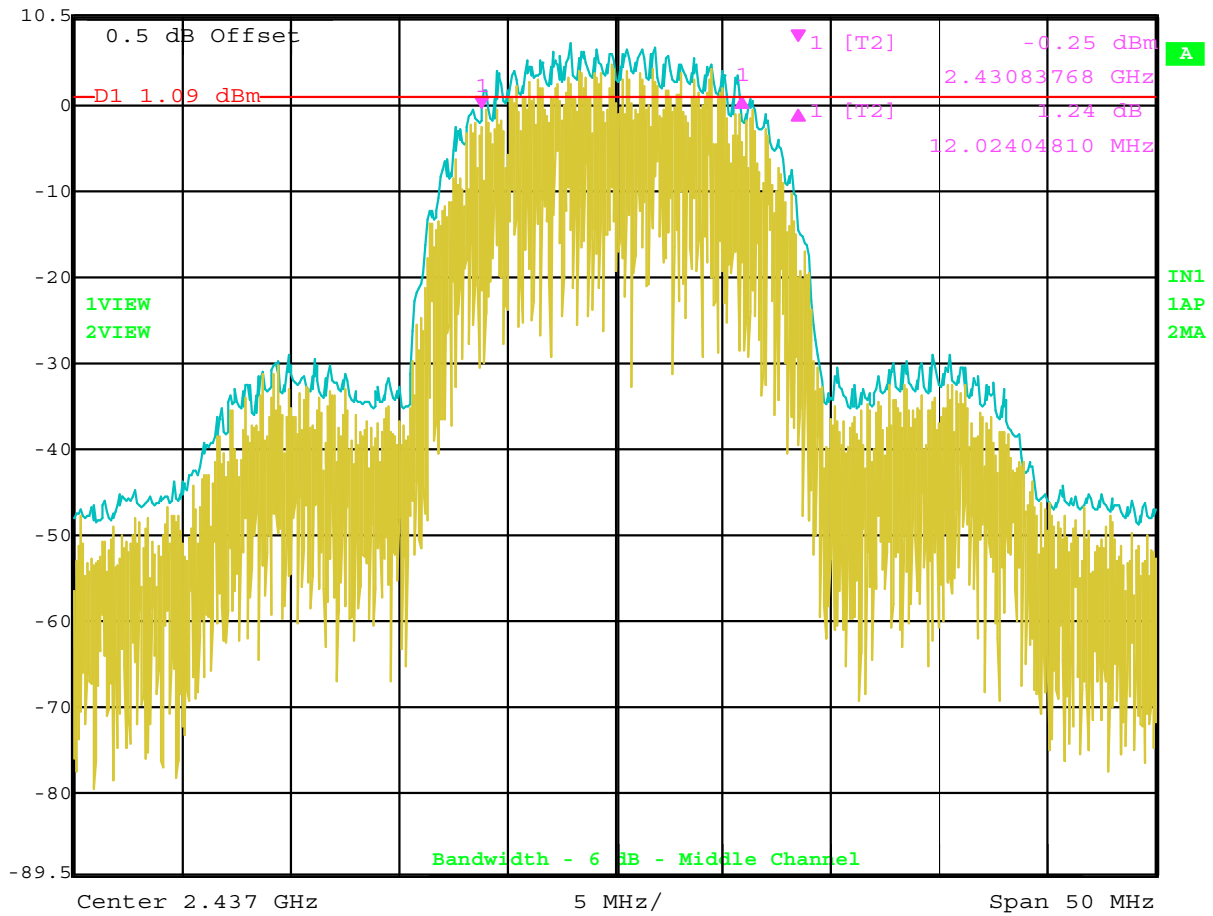
RBW 100 kHz RF Att 40 dB

Ref Lvl 1.24 dB

VBW 300 kHz

10.5 dBm 12.02404810 MHz

SWT 12.5 ms Unit dBm



Date: 15.OCT.2003 01:24:22



Delta 1 [T2]

RBW 100 kHz RF Att 40 dB

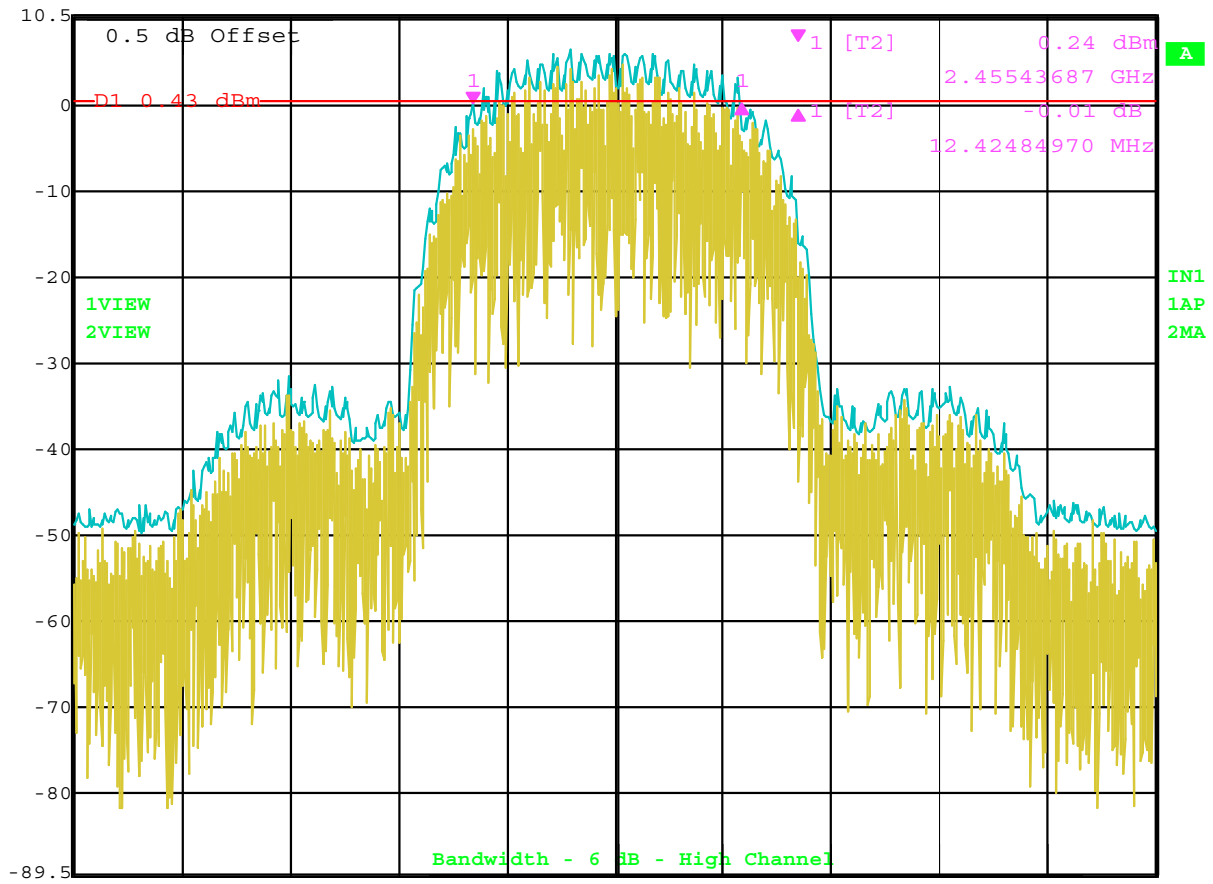
Ref Lvl -0.01 dB

VBW 300 kHz

10.5 dBm 12.42484970 MHz

SWT 12.5 ms

Unit dBm



Center 2.462 GHz

5 MHz/

Span 50 MHz

Date: 15.OCT.2003 01:40:59

PEAK POWER OUTPUT

DATA SHEETS

PEAK OUTPUT POWER

HEWLETT PACKARD COMPANY

HP NOTEBOOK COMPUTER SERIES HSTNN-I01C

MODEL: SERIES HSTNN-I01C

CHANNEL	PEAK POWER OUTPUT (dBm)
1	16.6
6	16.6
11	16.5

Note: Data Rate 1 was the worst case.

PEAK POWER SPECTRAL DENSITY
DATA SHEETS



Marker 1 [T2]

RBW 3 kHz RF Att 30 dB

Ref Lvl -2.35 dBm

VBW 10 kHz

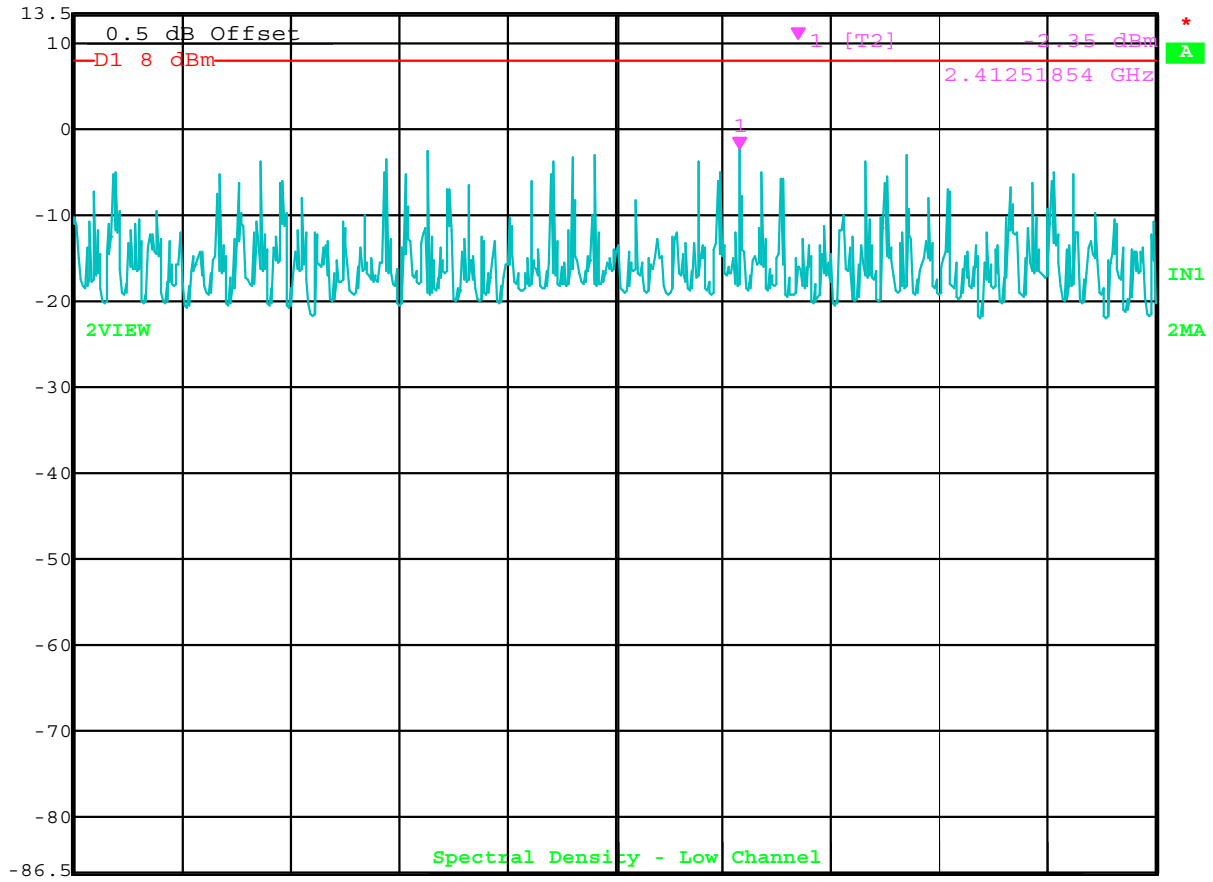
13.5 dBm

2.41251854 GHz

SWT 1500 s

Unit

dBm



Center 2.412 GHz

450 kHz/

Span 4.5 MHz

Date: 15.OCT.2003 21:07:54



Marker 1 [T2]

RBW 3 kHz RF Att 30 dB

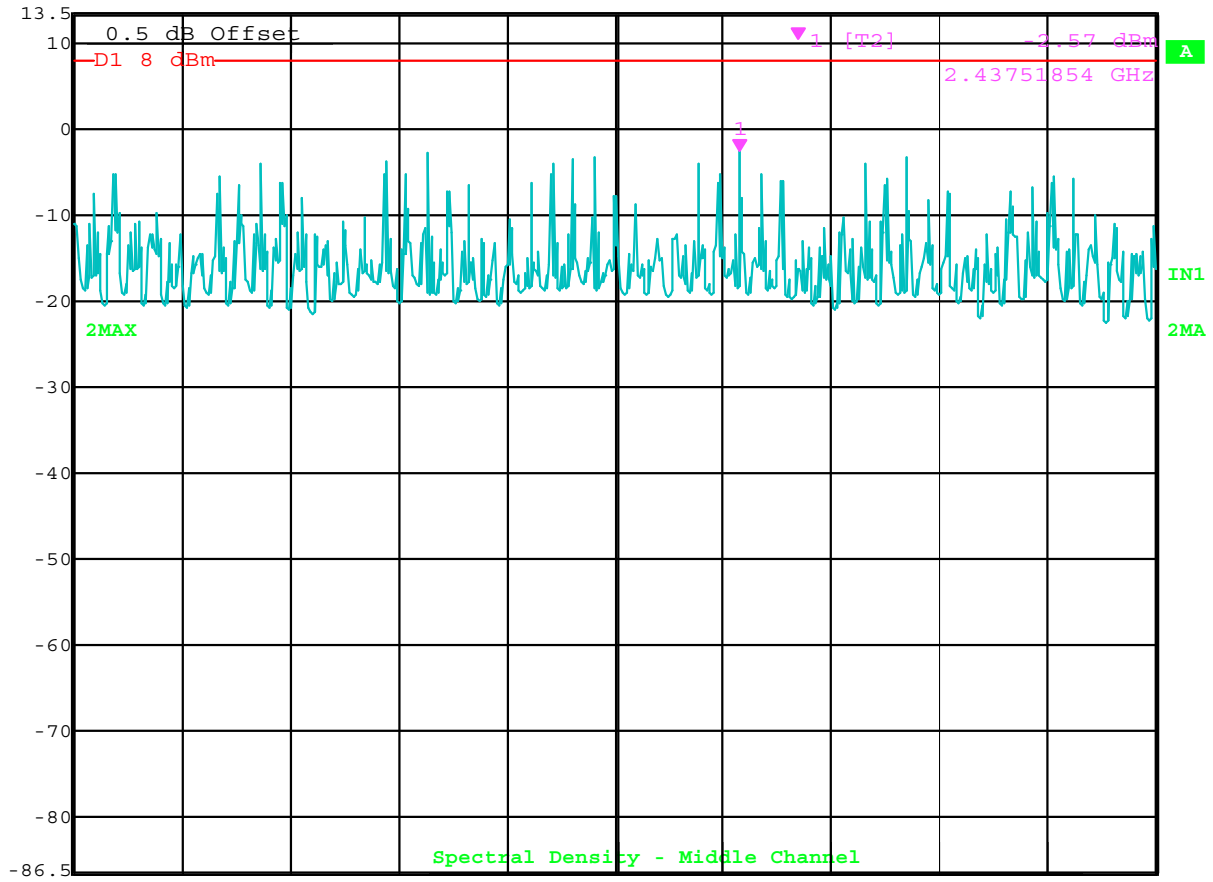
Ref Lvl -2.57 dBm

VBW 10 kHz

13.5 dBm 2.43751854 GHz

SWT 1500 s

Unit dBm



Center 2.437 GHz

450 kHz/

Span 4.5 MHz

Date: 15.OCT.2003 21:47:29



Marker 1 [T2]

RBW 3 kHz RF Att 30 dB

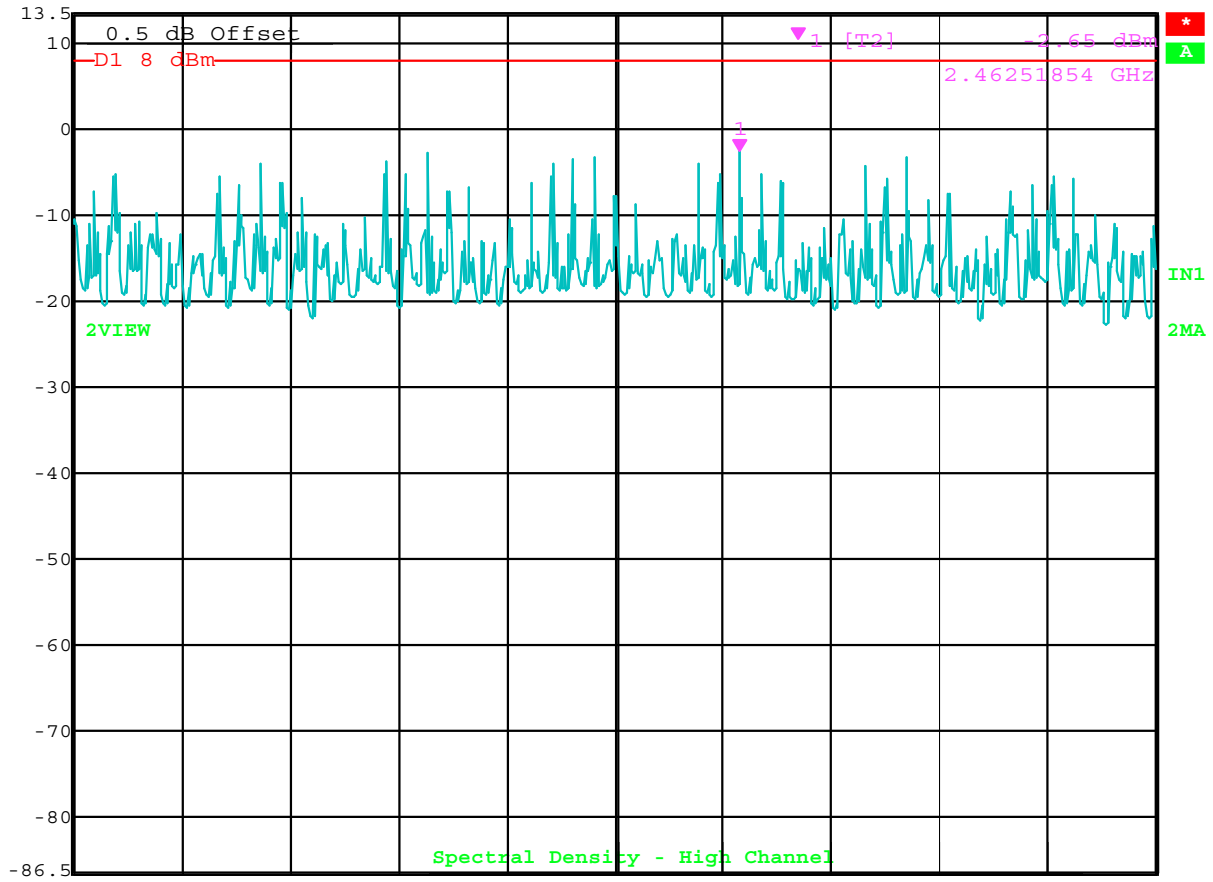
Ref Lvl -2.65 dBm

VBW 10 kHz

13.5 dBm 2.46251854 GHz

SWT 1500 s

Unit dBm



Center 2.462 GHz

450 kHz/

Span 4.5 MHz

Date: 15.OCT.2003 22:40:02

RF ANTENNA CONDUCTED

DATA SHEETS



Marker 1 [T2]

RBW 100 kHz RF Att 40 dB

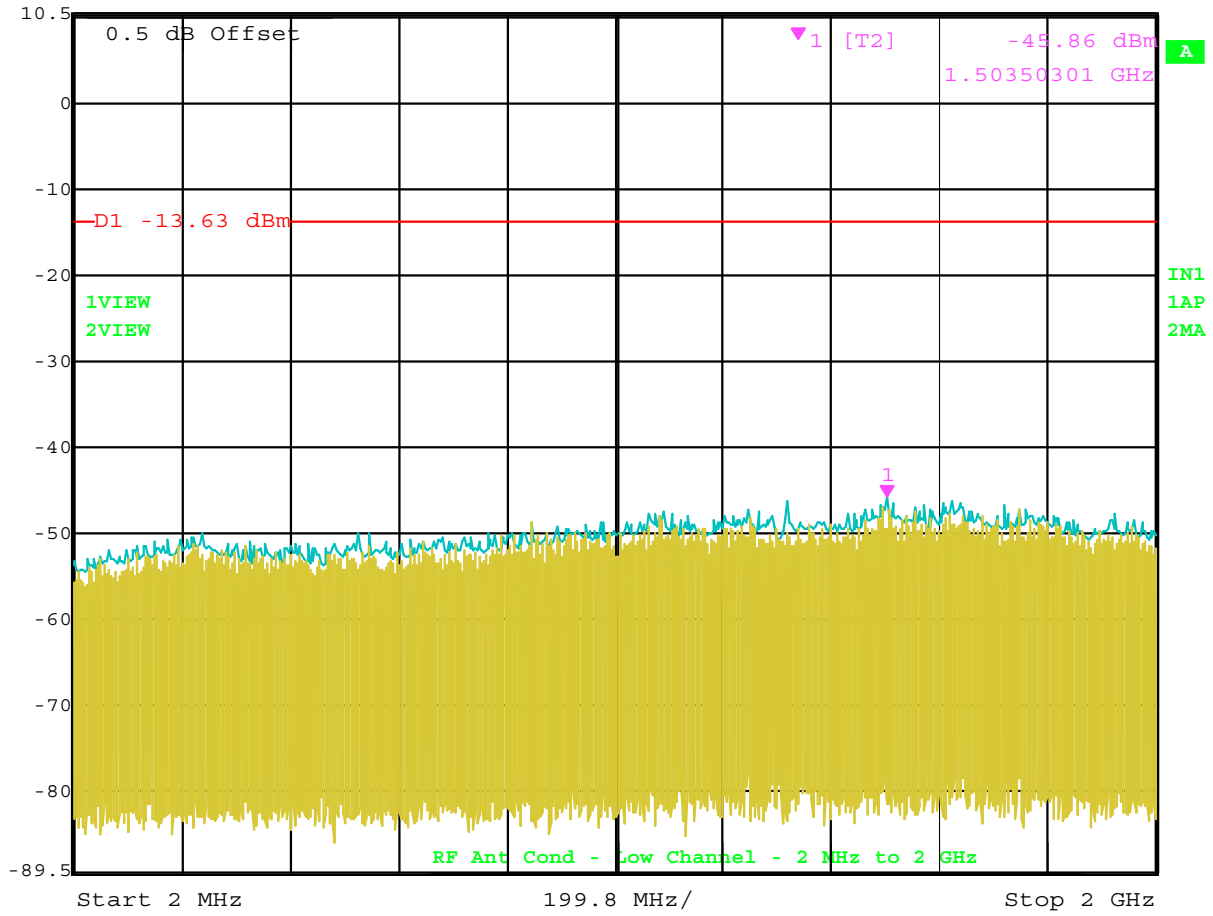
Ref Lvl -45.86 dBm

VBW 300 kHz

10.5 dBm 1.50350301 GHz

SWT 500 ms

Unit dBm



Date: 15.OCT.2003 01:16:03



Marker 1 [T2]

RBW 100 kHz RF Att 40 dB

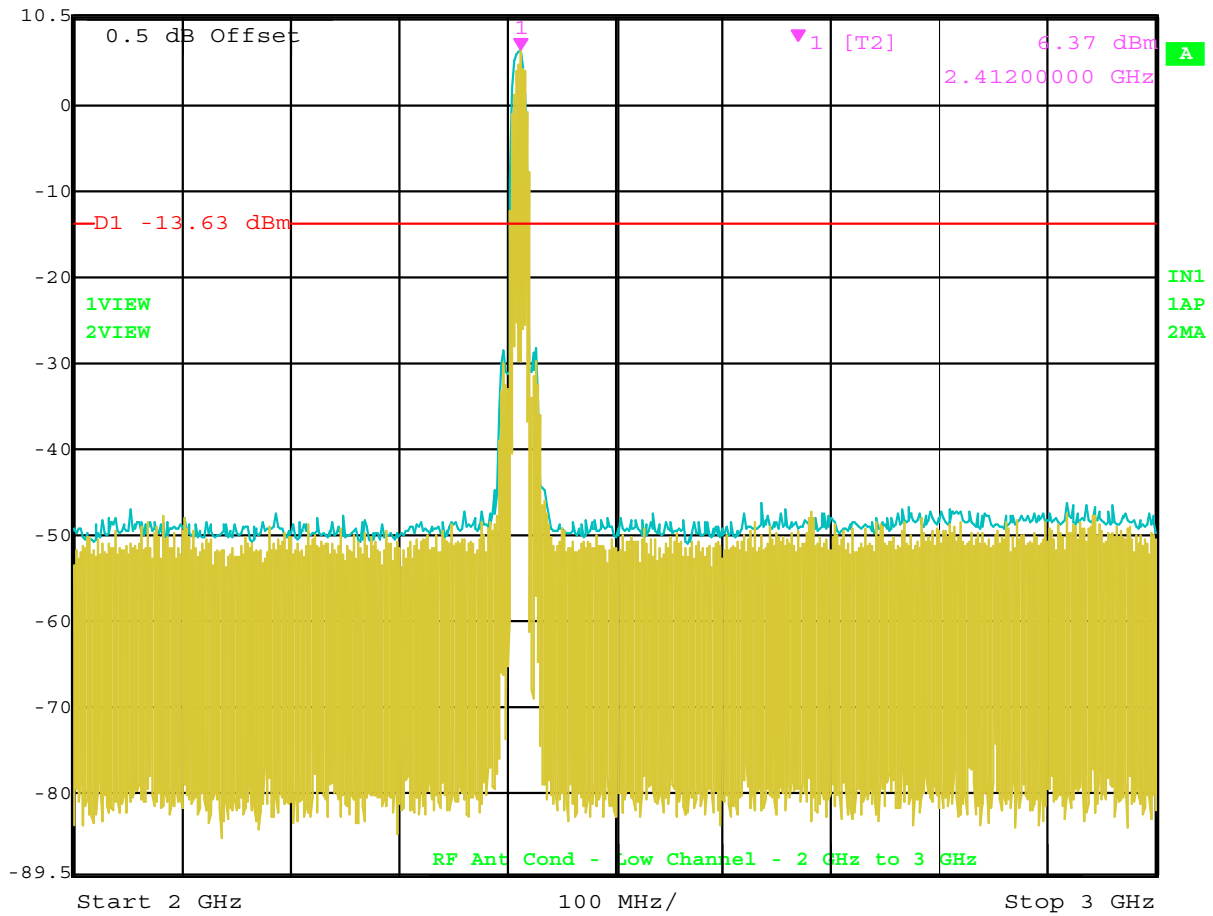
Ref Lvl 6.37 dBm

VBW 300 kHz

10.5 dBm 2.41200000 GHz

SWT 250 ms

Unit dBm



Date: 15.OCT.2003 01:15:10



Marker 1 [T2]

RBW 100 kHz RF Att 40 dB

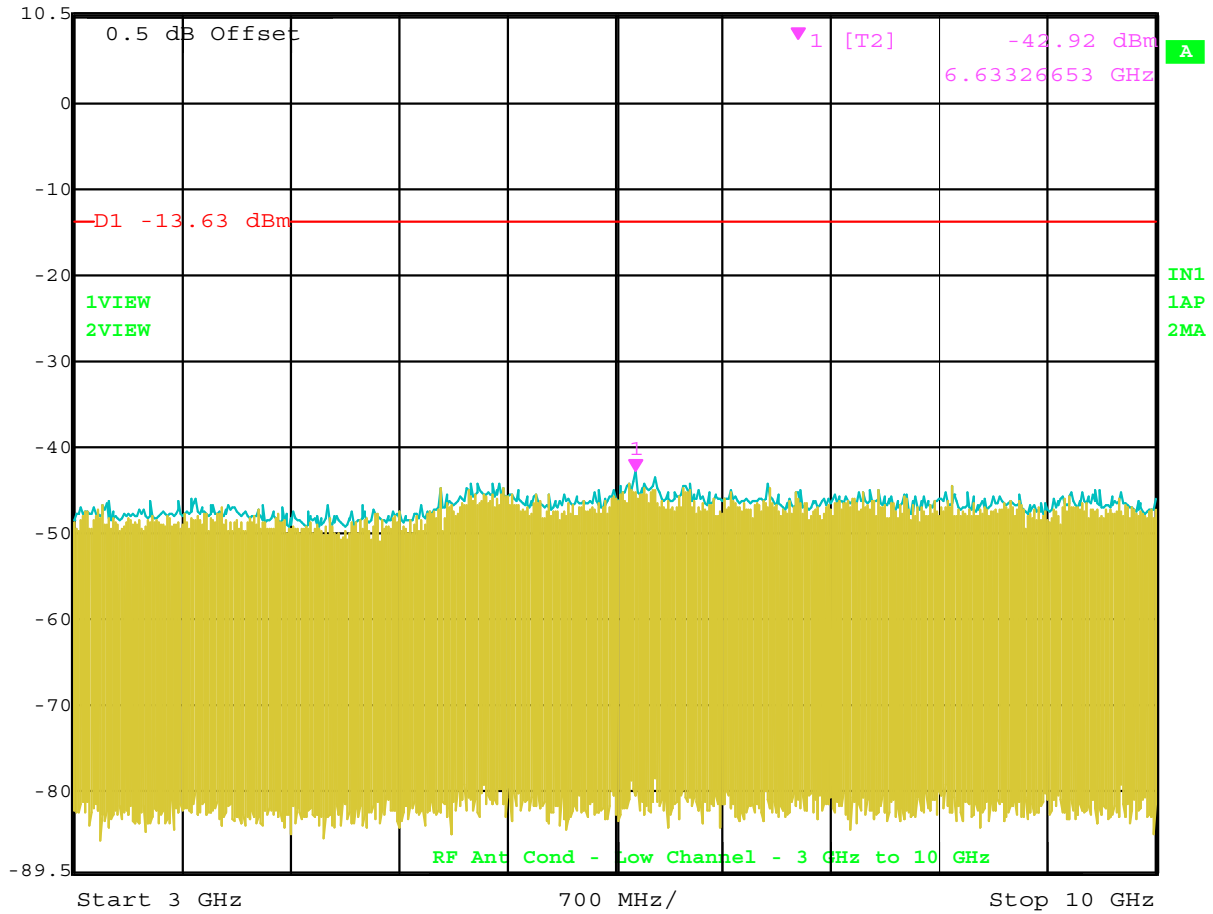
Ref Lvl -42.92 dBm

VBW 300 kHz

10.5 dBm 6.63326653 GHz

SWT 1.75 s

Unit dBm



Date: 15.OCT.2003 01:16:46



Marker 1 [T2]

RBW 100 kHz RF Att 40 dB

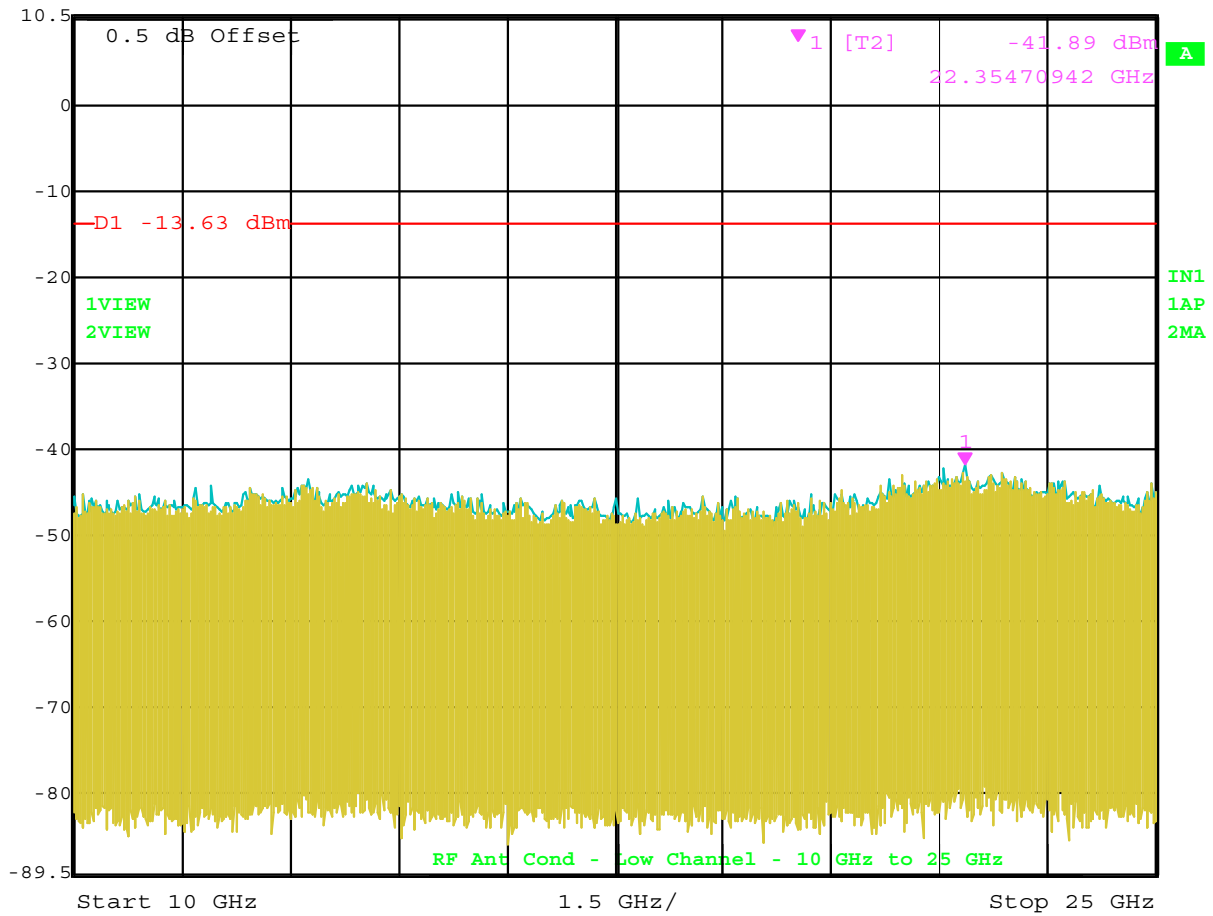
Ref Lvl -41.89 dBm

VBW 300 kHz

10.5 dBm 22.35470942 GHz

SWT 3.8 s

Unit dBm



Date: 15.OCT.2003 01:17:35



Marker 1 [T2]

RBW 100 kHz RF Att 40 dB

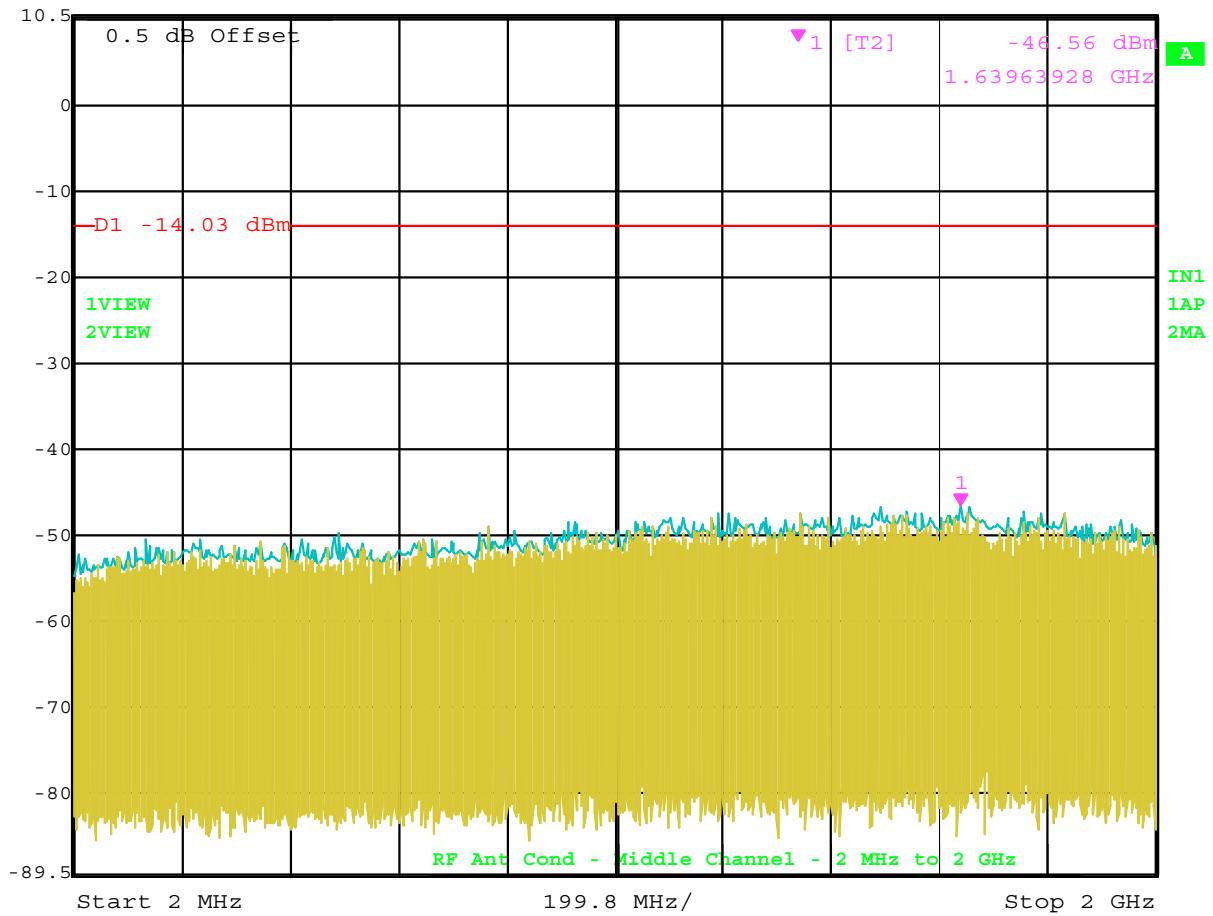
Ref Lvl -46.56 dBm

VBW 300 kHz

10.5 dBm 1.63963928 GHz

SWT 500 ms

Unit dBm



Date: 15.OCT.2003 01:27:15



Marker 1 [T2]

RBW 100 kHz RF Att 40 dB

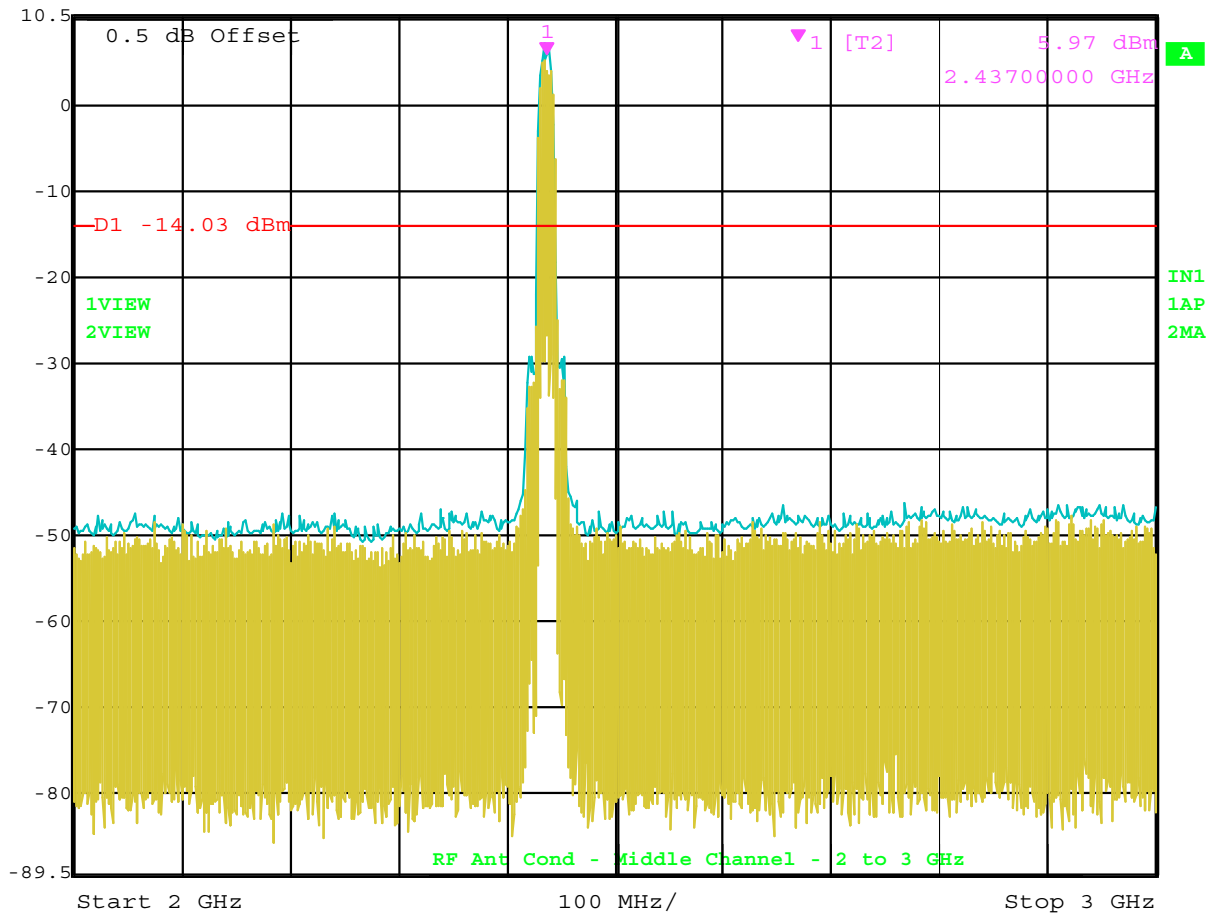
Ref Lvl 5.97 dBm

VBW 300 kHz

10.5 dBm 2.43700000 GHz

SWT 250 ms

Unit dBm



Date: 15.OCT.2003 01:25:55



Marker 1 [T2]

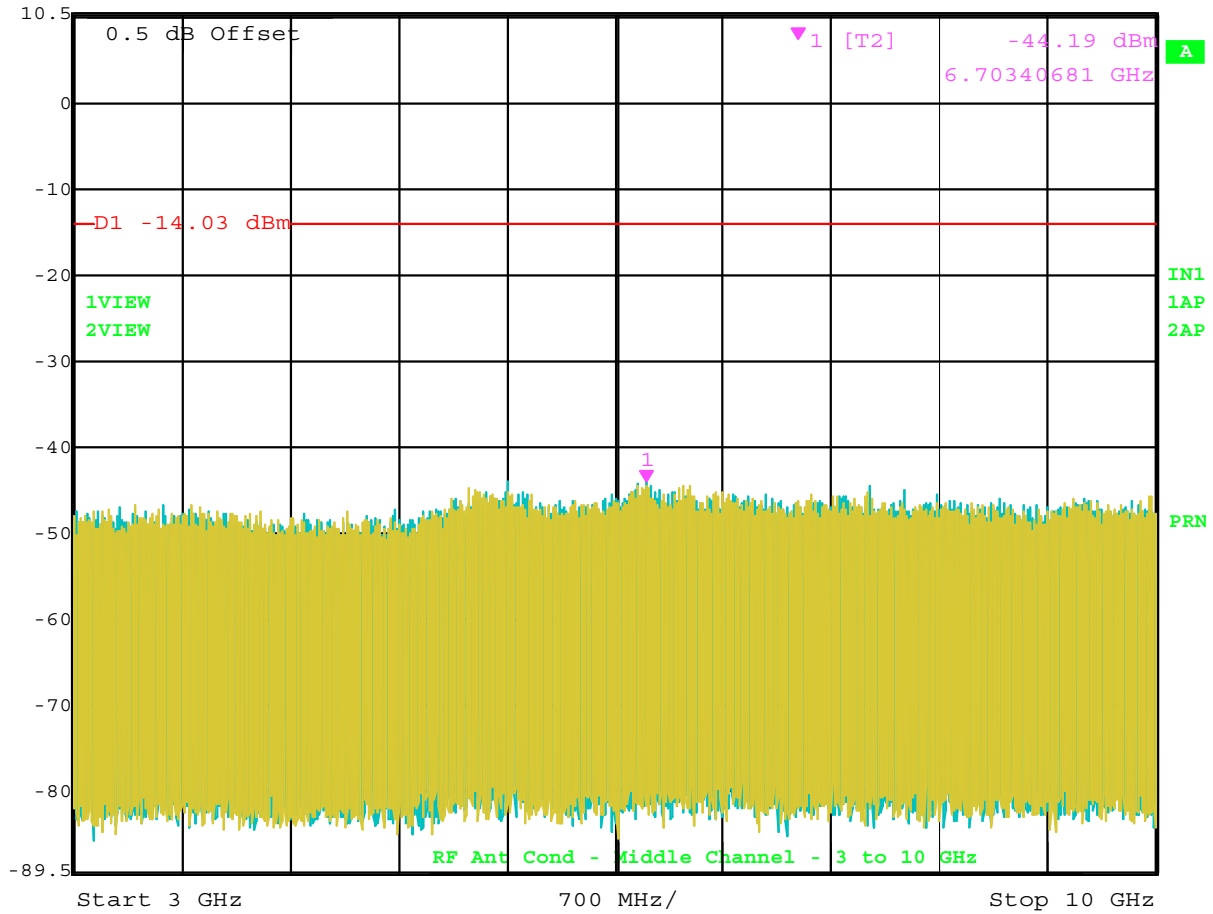
RBW 100 kHz RF Att 40 dB

Ref Lvl -44.19 dBm

VBW 300 kHz

10.5 dBm 6.70340681 GHz

SWT 1.75 s Unit dBm



Date: 15.OCT.2003 01:28:17



Marker 1 [T2]

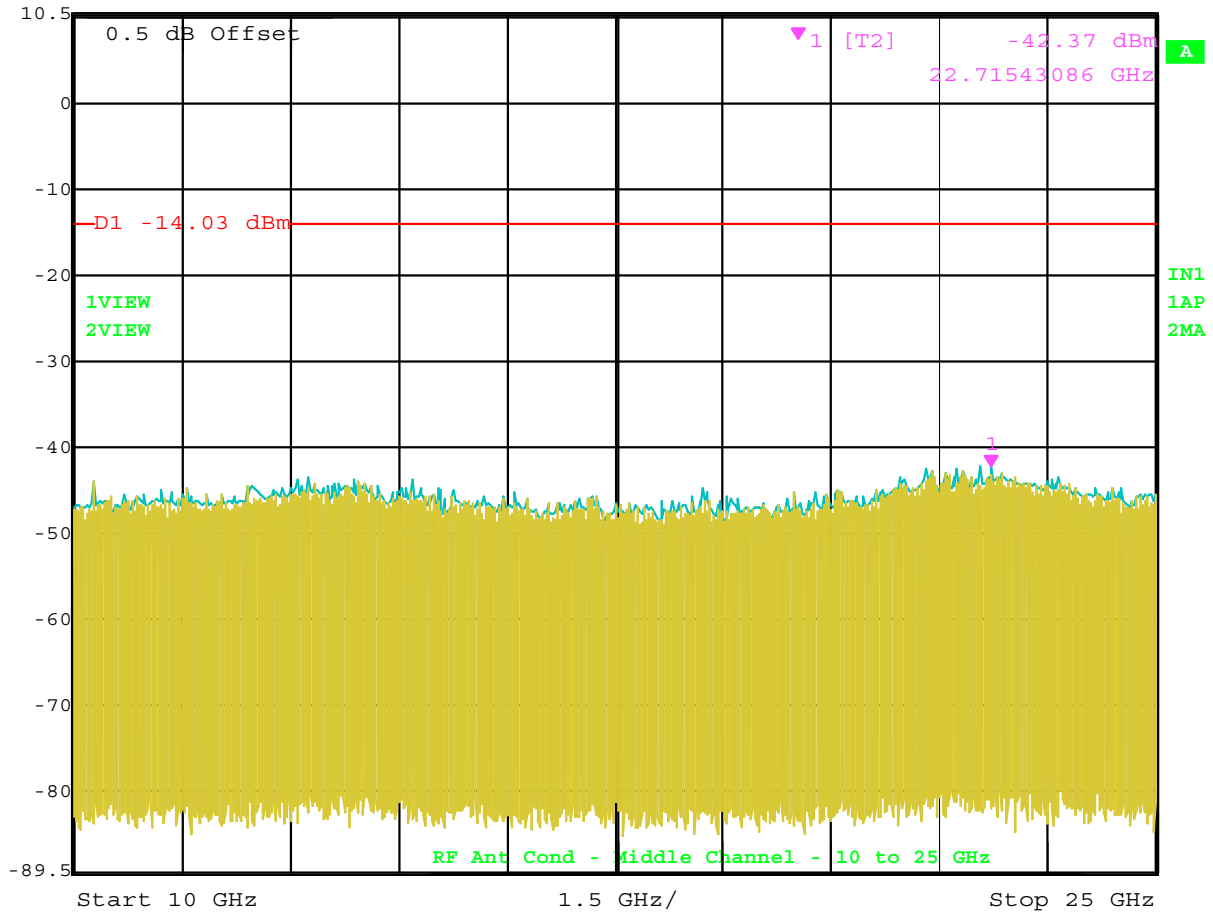
RBW 100 kHz RF Att 40 dB

Ref Lvl -42.37 dBm

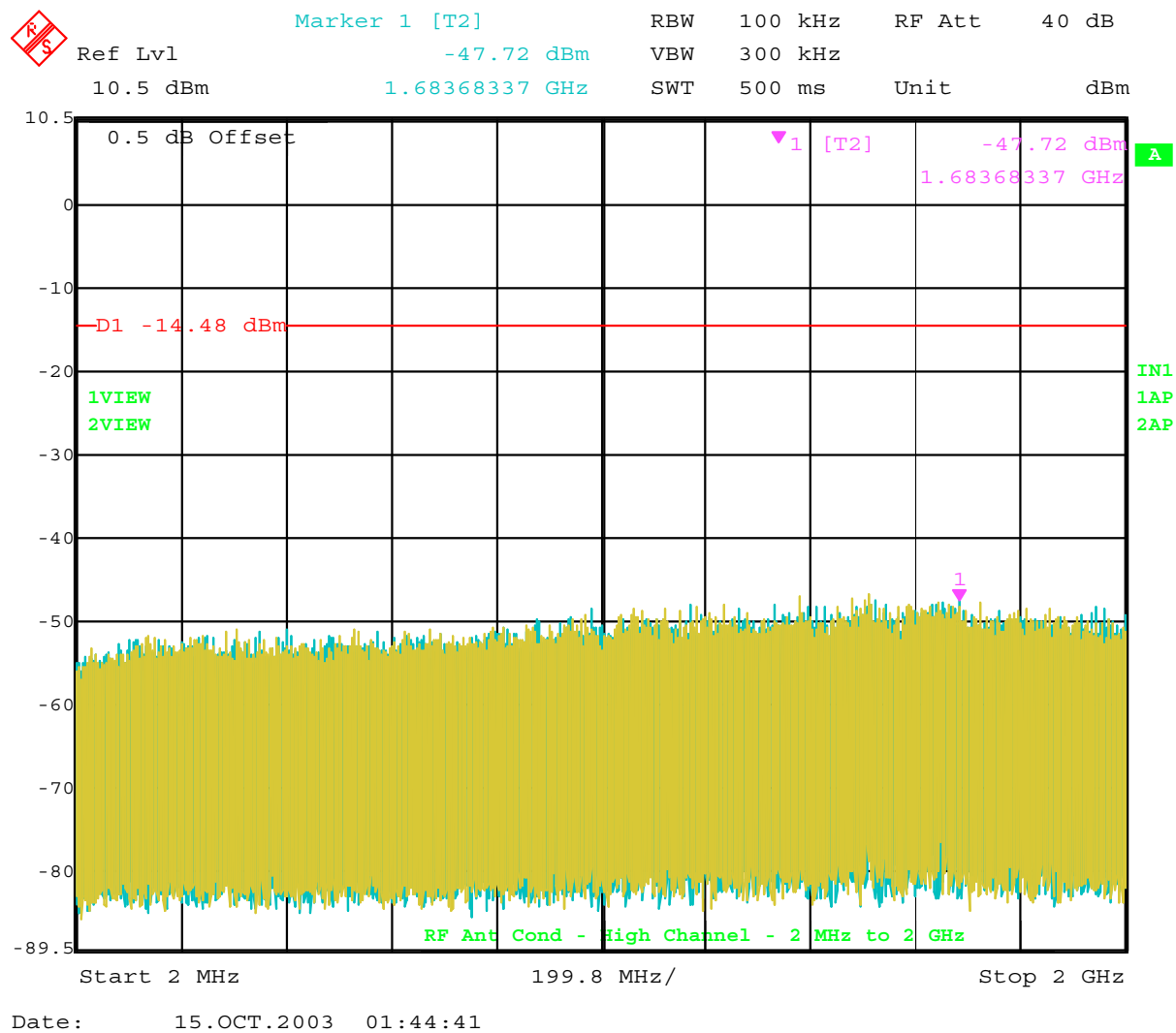
VBW 300 kHz

10.5 dBm 22.71543086 GHz

SWT 3.8 s Unit dBm



Date: 15.OCT.2003 01:29:17





Marker 1 [T2]

RBW 100 kHz RF Att 40 dB

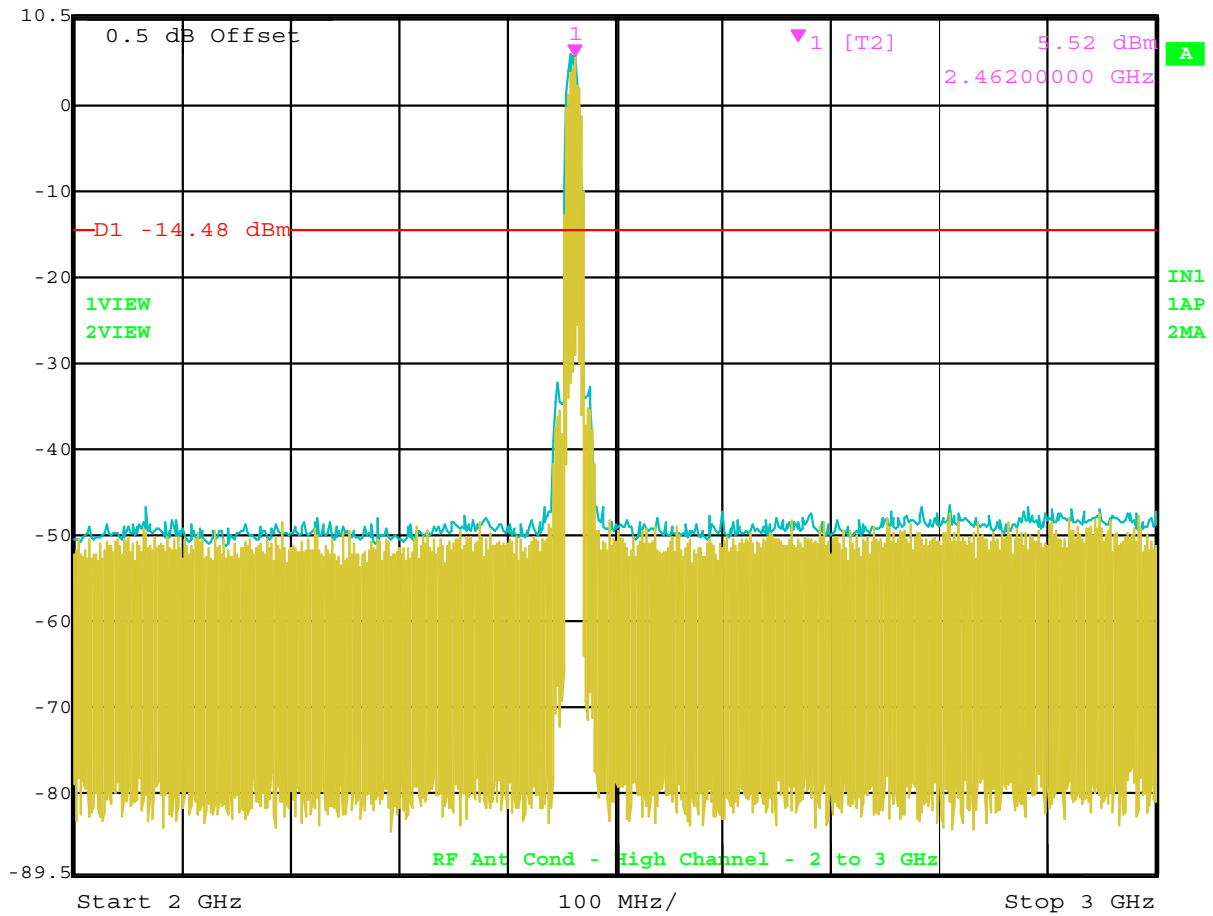
Ref Lvl 5.52 dBm

VBW 300 kHz

10.5 dBm 2.46200000 GHz

SWT 250 ms

Unit dBm



Date: 15.OCT.2003 01:43:24



Marker 1 [T2]

RBW 100 kHz RF Att 40 dB

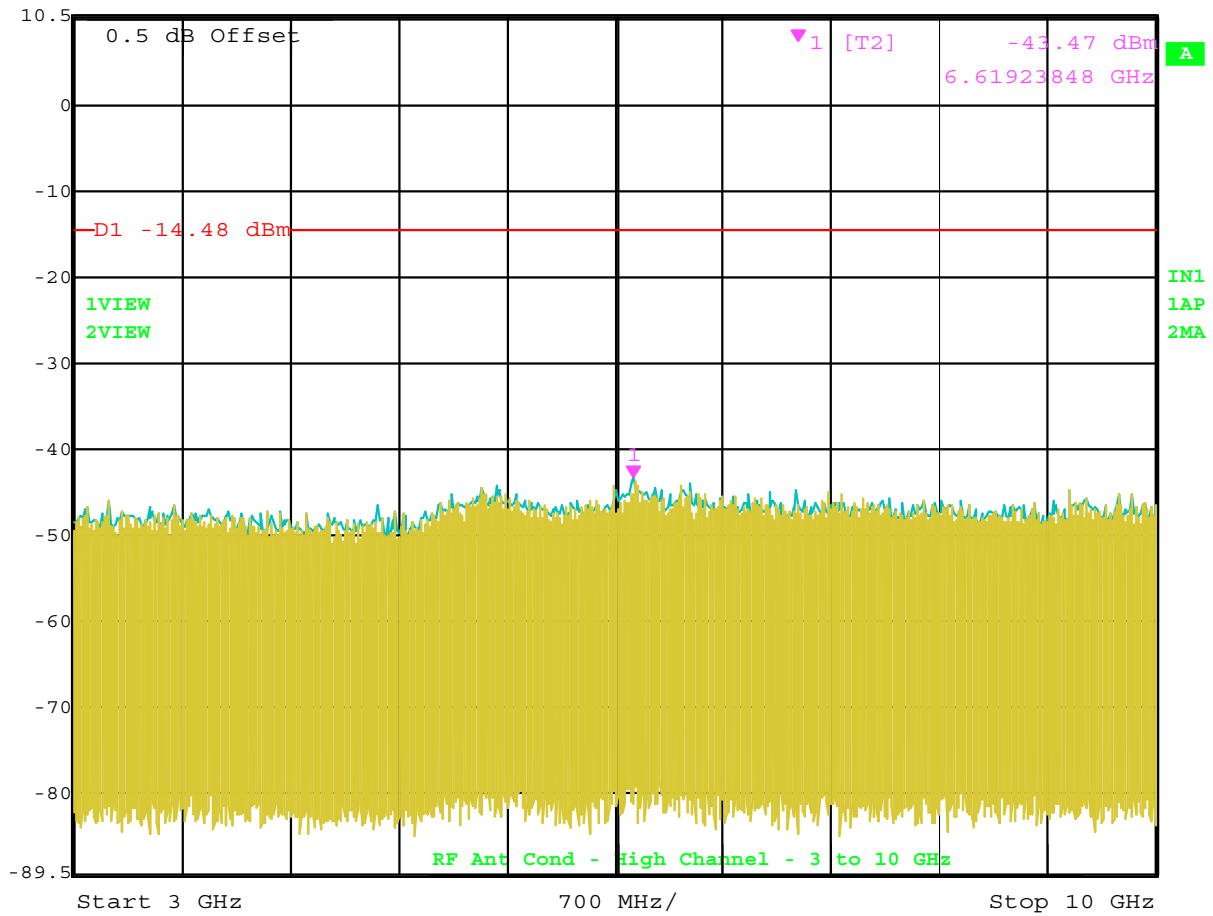
Ref Lvl -43.47 dBm

VBW 300 kHz

10.5 dBm 6.61923848 GHz

SWT 1.75 s

Unit dBm



Date: 15.OCT.2003 01:45:37



Marker 1 [T2]

RBW 100 kHz RF Att 40 dB

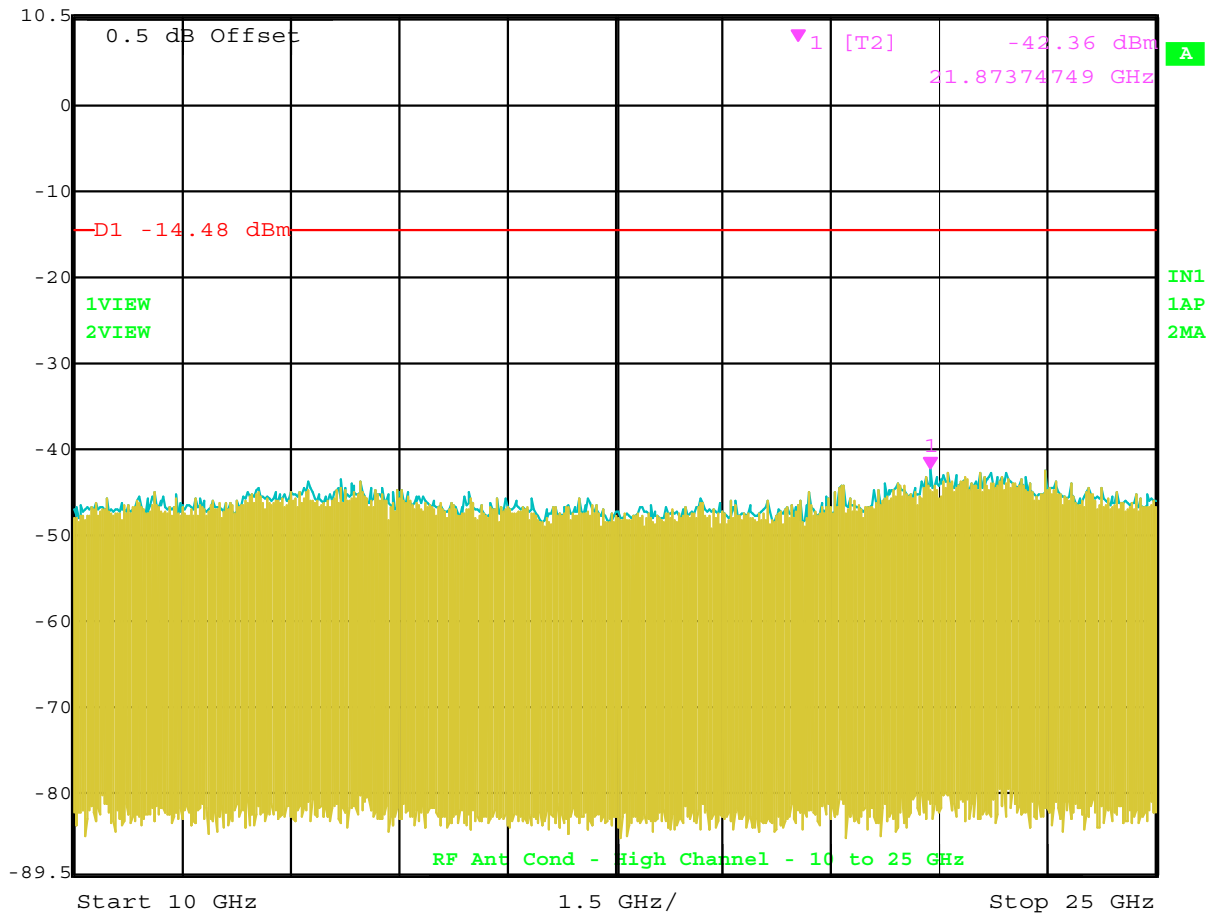
Ref Lvl -42.36 dBm

VBW 300 kHz

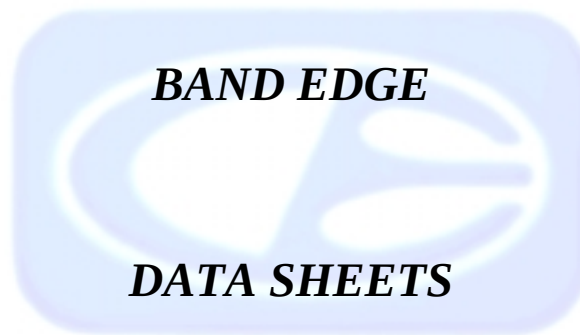
10.5 dBm 21.87374749 GHz

SWT 3.8 s

Unit dBm

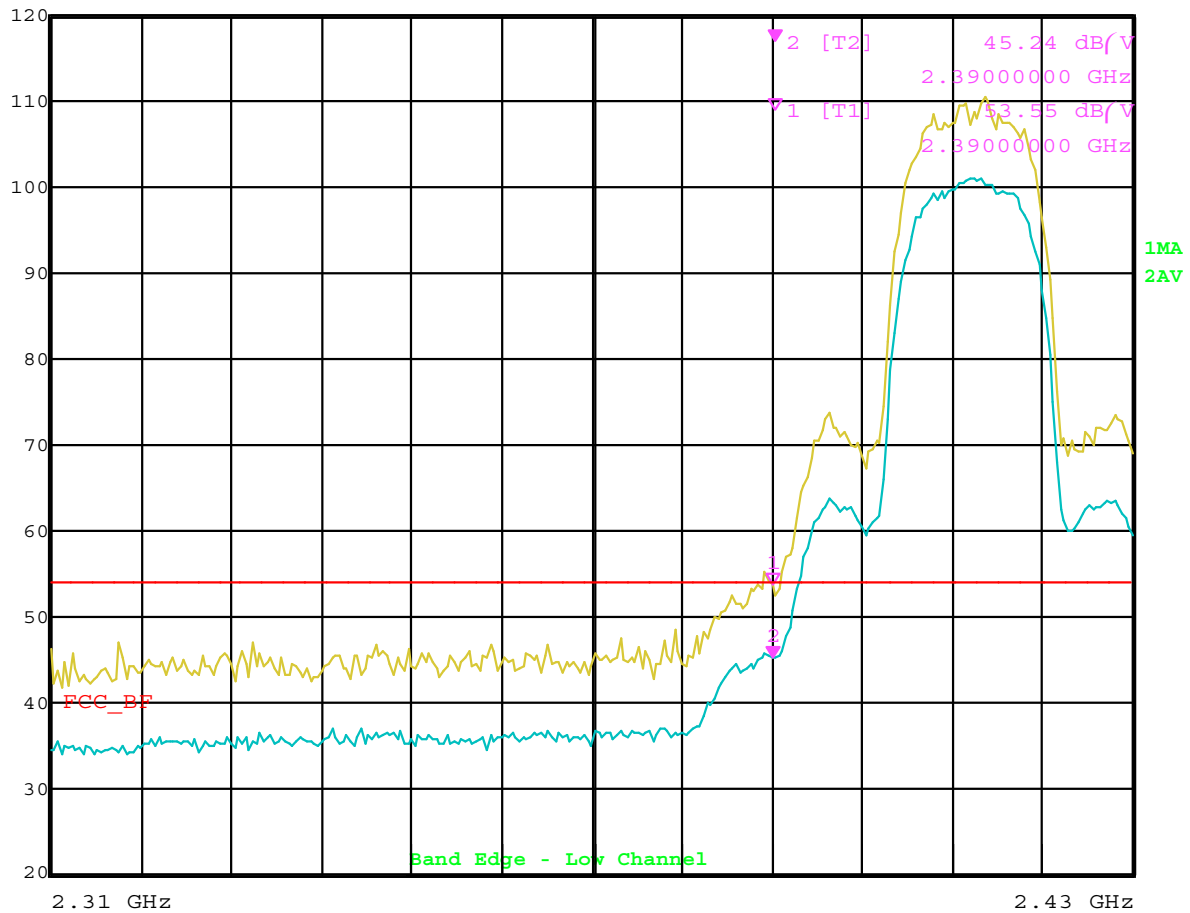


Date: 15.OCT.2003 01:46:26





Marker 2 [T2] Det MA/AV Trd Hi_Frelb
Att 10 dB AUTO 45.24 dB/V ResBW 1 MHz
Preamp INPUT 1 2.39000000 GHz Meas T 100 ms Unit dB/V

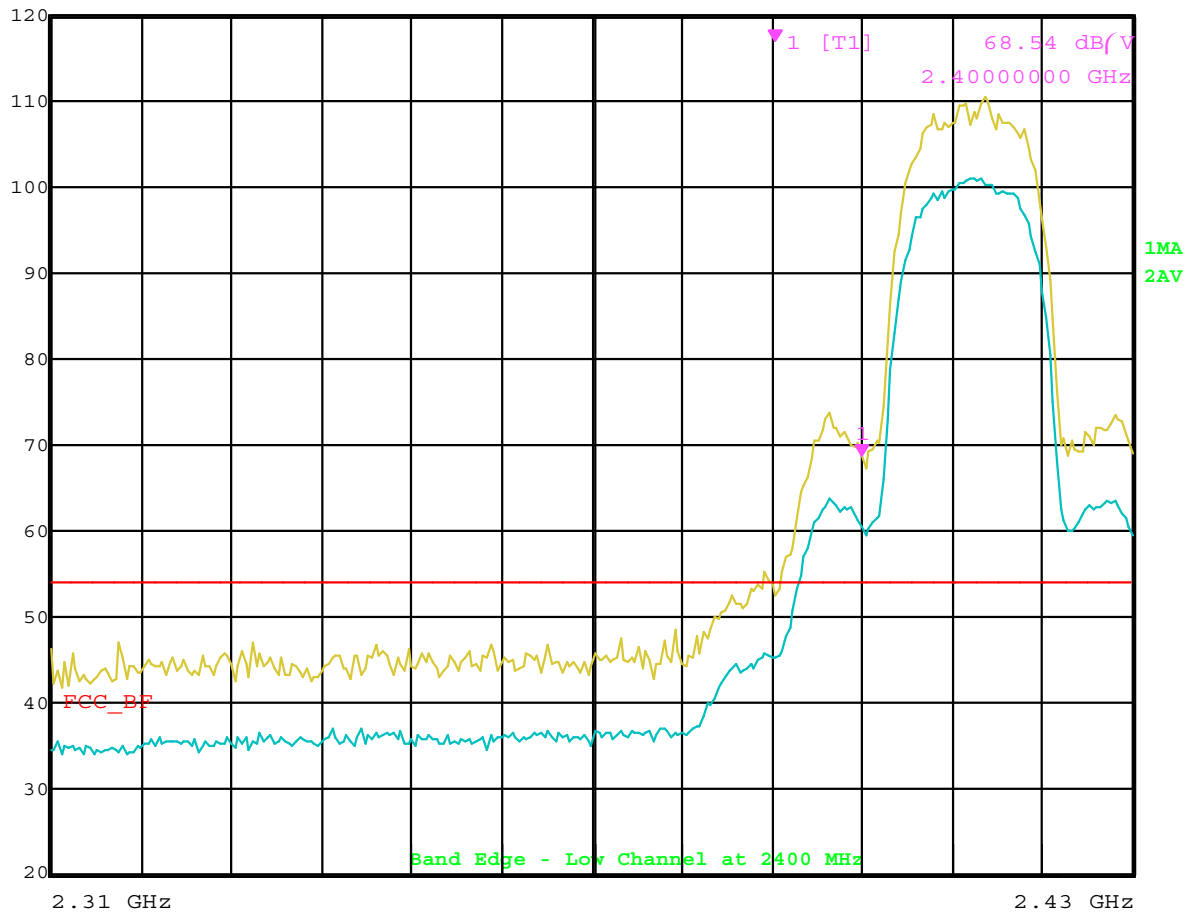


Date: 14.OCT.2003 18:40:23

Band Edge - Low Channel - Horizontal Polarization



Marker 1 [T1] Det MA/AV Trd Hi_Frelb
Att 10 dB AUTO 68.54 dB/V ResBW 1 MHz
Preamp INPUT 1 2.40000000 GHz Meas T 100 ms Unit dB/V

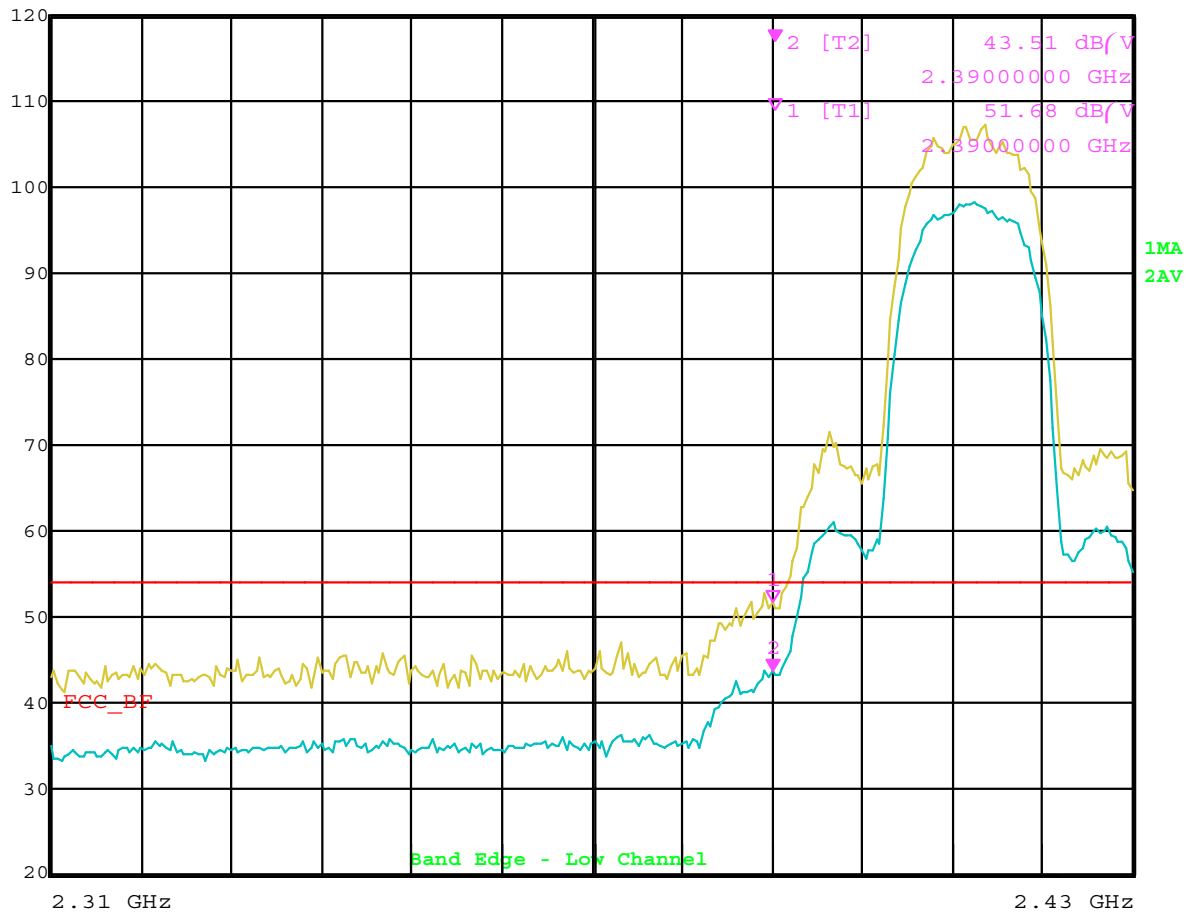


Date: 14.OCT.2003 18:42:59

Band Edge – Low Channel – Horizontal Polarization – at 2400 MHz



Att 10 dB AUTO Marker 2 [T2] Det MA/AV Trd Hi_Frelb
Preamp INPUT 1 43.51 dB/V ResBW 1 MHz
2.39000000 GHz Meas T 100 ms Unit dB/V

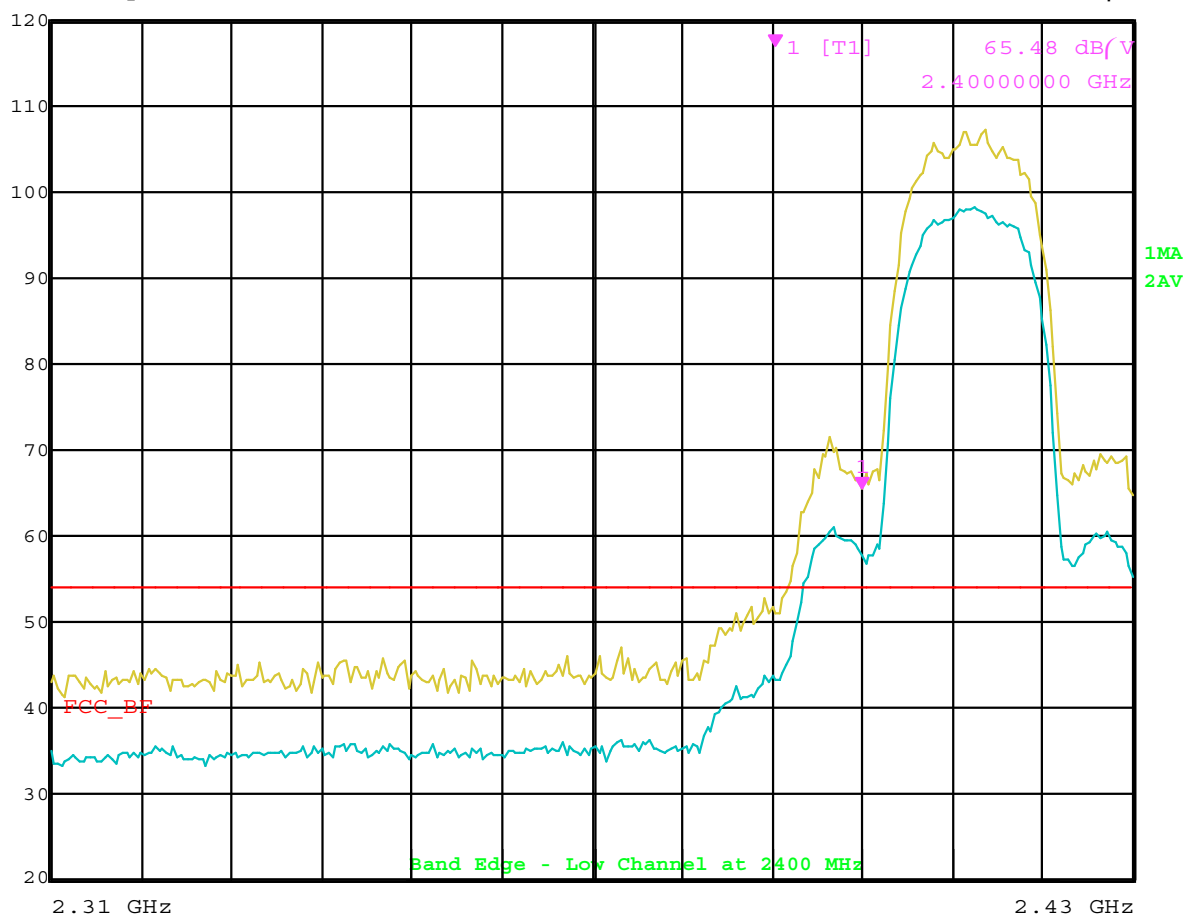


Date: 14.OCT.2003 18:55:21

Band Edge - Low Channel - Vertical Polarization



Marker 1 [T1] Det MA/AV Trd Hi_Fre1b
Att 10 dB AUTO 65.48 dB/V ResBW 1 MHz
Preamp INPUT 1 2.40000000 GHz Meas T 100 ms Unit dB/V

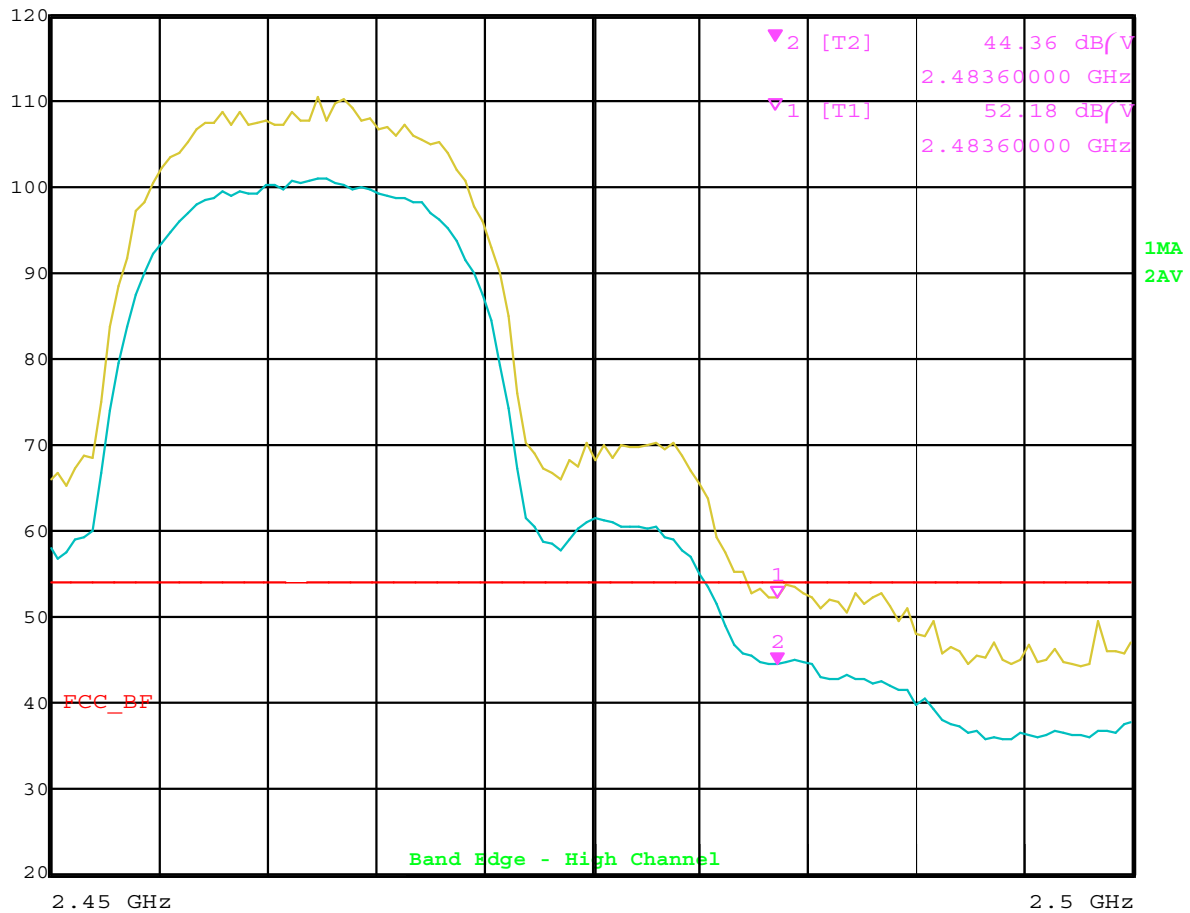


Date: 14.OCT.2003 18:57:16

Band Edge – Low Channel – Vertical Polarization – at 2400 MHz



Att 0 dB AUTO Marker 2 [T2] Det MA/AV Trd Hi_Frelb
Preamp INPUT 1 44.36 dB/V ResBW 1 MHz
2.48360000 GHz Meas T 100 ms Unit dB/V

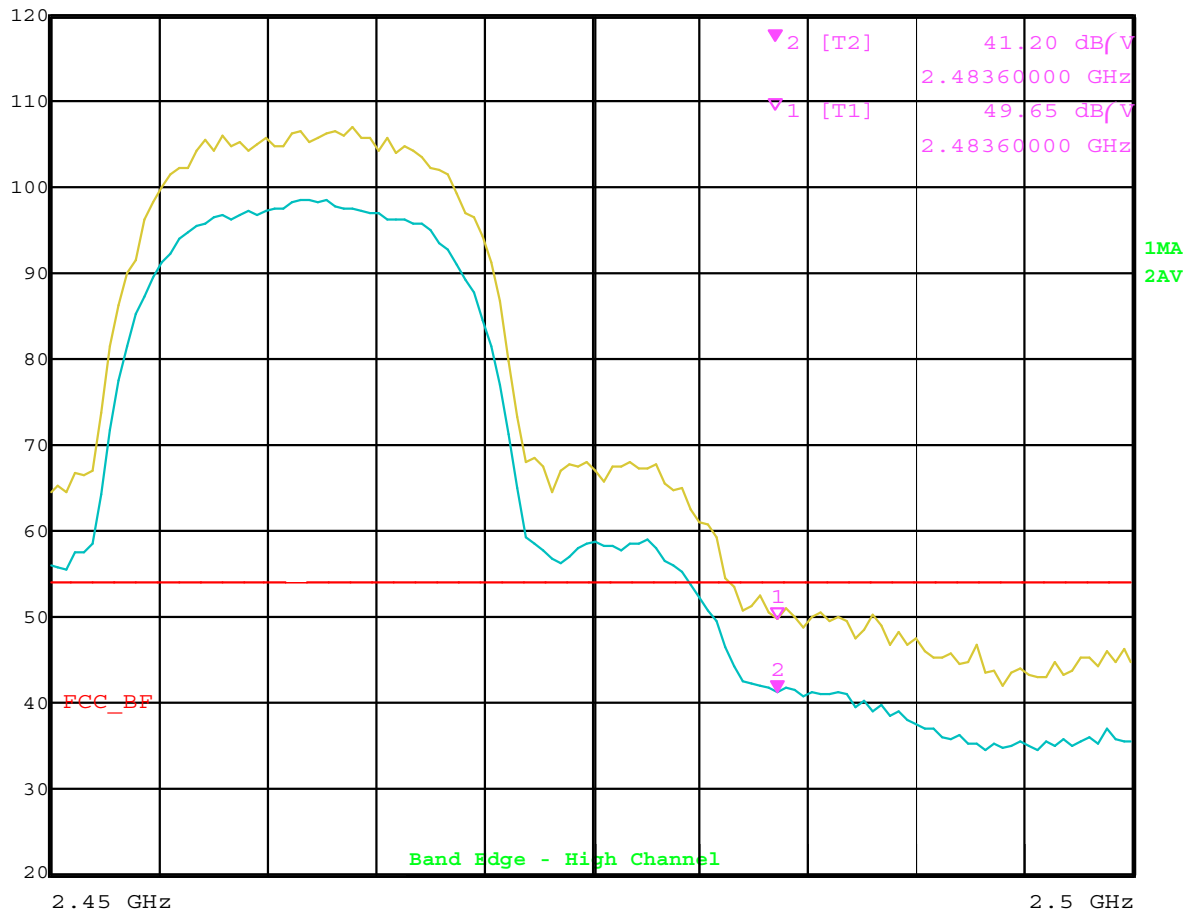


Date: 14.OCT.2003 18:31:50

Band Edge – High Channel – Horizontal Polarization



Marker 2 [T2] Det MA/AV Trd Hi_Frelb
Att 0 dB AUTO 41.20 dB/V ResBW 1 MHz
Preamp INPUT 1 2.48360000 GHz Meas T 100 ms Unit dB/V



Date: 14.OCT.2003 18:21:06

Band Edge – High Channel – Vertical Polarization