FCC PART 90 and
PART 15, SUBPART B TEST REPORT

for

2.4 GHZ VIDEO TRANSMITTER

Model: SSIVTX01

Prepared for

SEARCH SYSTEMS, INC.
P.O. BOX 80307
BAKERSFIELD, CALIFORNIA 93380-0307

Prepared by: _____

KYLE FUJIMOTO

Approved by: _____

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DATE: AUGUST 14, 2002

	REPORT BODY	APPENDICES					TOTAL
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1	Plot Map And Layout of Test Site

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 or any other agency of the U.S. Government.

Device Tested:	2.4 GHz Video Transmitter Model: SSIVTX01 S/N: N/A
Product Description:	See Expository Statement.
Modifications:	The EUT was not modified during the testing.
Manufacturer:	Search Systems, Inc. P.O. Box 80307 Bakersfield, California 93380-0307
Test Date:	June 14, 2002
File # For Canada:	IC2154-D
Test Specifications:	EMI requirements CFR Title 47, Part 90, Subpart I; and CFR Title 47, Part 15, Subpart B
Test Procedure:	ANSI C63.4: 1992 and
Test Deviations:	The test procedure was not deviated from during the testing.

SUMMARY OF TEST RESULTS

TEST	DESCRIPTION	RESULTS
1	Conducted RF Emissions, 450 kHz - 30 MHz	This test was not performed because the EUT operates on 7 Vdc only and will not be plugged into the AC public mains.
2	RF Power Output of the EUT	Complies with the limits of CFR Title 47, Part 90, Section 90.205 (1)
3	Modulation Characteristics – Audio Frequency Response	This test was not performed because this test is not applicable to the EUT
4	Modulation Characteristics – Modulation Limiting Response	This test was not performed because this test is not applicable to the EUT
5	Occupied Bandwidth for the EUT	Complies with the limits of CFR Title 47, Part 90 Section 90.210 (b)
6	Radiated RF Emissions on the Digital Portion 30 MHz – 25000 MHz	Complies with the **Class B** limits of CFR Title 47, Part 15, Subpart B
7	Radiated Spurious Emissions on the Transmitter portion – 10 kHz to 25000 MHz	Complies with the limits of CFR Title 47, Part 90 Section 90.210 (b)
8	Spurious Emissions at the Antenna Terminal	Complies with the limits of CFR Title 47, Part 90 Section 90.210 (b)
9	Frequency Stability	Complies with the limits of CFR Title 47, Part 90 Section 90.213

1. PURPOSE

This document is a qualification test report based on the Electromagnetic Interference (EMI) tests performed on the 2.4 GHz Video Transmitter Model: SSIVTX01. The EMI measurements were performed according to the measurement procedure described in ANSI C63.4: 1992. 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 **Class B** specification limits defined by CFR Title 47, Part 15, Subpart B; and CFR Title 47, Part 90, Subpart I.

2. ADMINISTRATIVE DATA

2.1 Location of Testing

The EMI tests described herein were performed at the test facility of Compatible Electronics, 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

Search Systems, Inc.

Scott Park President

Compatible Electronics Inc.

Kyle Fujimoto Test Engineer
Michael Christensen Lab Manager

2.4 Date Test Sample was Received

The test sample was received on August 01, 2002.

2.5 Disposition of the Test Sample

The test sample was returned to Search Systems, Inc. on August 13, 2002.

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
Tx	Transmitter
Rx	Receiver

3. APPLICABLE DOCUMENTS

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

SPEC	TITLE
CFR Title 47, Part 15	FCC Rules – Radio frequency devices (including digital devices)
ANSI C63.4 1992	Methods of measurement of radio-noise emissions from low-voltage electrical and electronic equipment in the range of 9 kHz to 40 GHz.
CFR Title 47, Part 90	FCC Rules – Private Land Mobile Radio Services
TIA / EIA-603-A 2001	Land Mobile FM or PM Communications Equipment – Measurement and Performance Standards

4. DESCRIPTION OF TEST CONFIGURATION

4.1 Description of Test Configuration - EMI

Specifics of the EUT and Peripherals Tested

For Part 15 and 90 testing: The 2.4 GHz Video Transmitter Model: SSIVTX01 (EUT) was connected to a DC Power Supply, function generator, video camera, and two toggle switches. The EUT was transmitting while being modulated by the camera and a 1 kHz tone from the function generator on a continuous basis. The antenna port was terminated by a 50 ohm terminator.

The first toggle switch was to change between the low and high channel. The second toggle switch was to enable the video scramble feature. The video scramble feature did not affect the modulation of the EUT.

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

4.1.1 Cable Construction and Termination

Cable 1 This is a 2 foot unshielded cable connecting the regulatory 5 volt DC power supply to the video camera. It is hard wired at each end.

Cable 2 This is a 1 meter unshielded cable connecting the EUT to the video camera. It is hard wired at each end.

Cable 3 This is a 1 meter unshielded cable connecting the EUT to the 7 volt DC power supply. It is hard wired at each end.

Cable 4 This is a 1 meter unshielded cable connecting the EUT to the white toggle switch. It is hard wired at each end.

Cable 5 This is a 1 meter unshielded cable connecting the EUT to the green toggle switch. It is hard wired at each end.

Cable 6 This is a 1 meter braid shielded cable connecting the EUT's antenna port to a 50 ohm terminator. It has an SMA connector the EUT end and an SMA with SMA to BNC adapter at the terminator end. 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
2.4 GHZ VIDEO TRANSMITTER (EUT)	SEARCH SYSTEMS, INC.	SSIVTX01	N/A	**PMHSSIVTX01**
5 VOLT DC POWER SUPPLY	HEWLETT PACKARD	8236B	2735A024498	**N/A**
50 OHM TERMINATOR	N/A	N/A	N/A	**N/A**
FUNCTION GENERATOR	HEWLETT PACKARD	3312A	2501A19538	**N/A**
VIDEO CAMERA	SEARCH SYSTEMS, INC.	N/A	NA	**N/A**
7 VOLT DC POWER SUPPLY	HEWLETT PACKARD	6012B	2524A00848	**N/A**

5.2 EMI Test Equipment

EQUIPMENT TYPE	MANU-FACTURER	MODEL NUMBER	SERIAL NUMBER	CAL. DATE	CAL. DUE DATE
Radiated Emissions Manual Test – Radiated	Compatible Electronics	N/A	N/A	N/A	N/A
Spectrum Analyzer – Main Section	Hewlett Packard	8566B	3638A08768	June 21, 2002	June 21, 2003
Spectrum Analyzer – Display Section	Hewlett Packard	85662A	3701A22262	June 21, 2002	June 21, 2003
Spectrum Analyzer – Quasi-Peak Adapter	Hewlett Packard	85662A	2811A01363	June 21, 2002	June 21, 2003
Preamplifier	Com Power	PA-102	1017	Dec. 31, 2001	Dec. 31, 2002
Biconical Antenna	Com Power	AB-100	1548	Oct. 11, 2001	Oct. 11, 2002
Log Periodic Antenna	Com Power	AL-100	16089	Oct. 11, 2001	Oct. 11, 2002
Computer	Hewlett Packard	D5251A 888	US74458128	N/A	N/A
Printer	Hewlett Packard	C5886A	SG7CM1P090	N/A	N/A
Monitor	Hewlett Packard	D5258A	DK74889705	N/A	N/A
Loop Antenna	Com-Power	AL-130	17070	June 19, 2002	June 19, 2003
Horn Antenna	Antenna Research	DRG-118/A	1053	Jan. 13, 2002	Jan. 13, 2003
Microwave Preamplifier	Com-Power	PA-122	25195	Jan. 7, 2002	Jan. 7, 2003
Horn Antenna	Com-Power	AH-118	10073	Jan. 21, 2002	Jan. 21, 2003

EMI Test Equipment (Continued)

EQUIPMENT TYPE	MANU-FACTURER	MODEL NUMBER	SERIAL NUMBER	CAL. DATE	CAL. DUE DATE
Horn Antenna	Com-Power	AH826	0071957	Nov. 3, 2001	Nov. 3, 2002
Amplifier	Hewlett Packard	11975A	2403A00202	March 15, 2002	March 15, 2003
Harmonic Mixer	Hewlett Packard	11970K	3003A05460	March 14, 2002	March 14, 2003
Power Meter	Hewlett Packard	436A	2236A15362	May 25, 2002	May 25, 2003
Power Sensor	Hewlett Packard	8482H	GG00000006	May 25, 2002	May 25, 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. TEST PROCEDURES

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

7.1 Radiated Emissions Test for Part 15

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, and the Com-Power Microwave Preamplifier Model: PA-122 was used for frequencies above 1 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.

For the peak readings below 1000 MHz that were within 3 dB of the spec limit or higher, the quasi-peak adapter was used.

For the peak readings above 1000 MHz that were within 3dB of the spec limit or higher, the readings were averaged manually by narrowing the video filter down to 10 Hz and slowing the sweep time to keep the amplitude reading calibrated.

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

FREQUENCY RANGE	EFFECTIVE MEASUREMENT BANDWIDTH	TRANSDUCER
9 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: 1992. 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. 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. The loop antenna was also rotated in the horizontal and vertical axis 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 test data. The final qualification data sheets are located in Appendix E.

For the 22 GHz – 25 GHz span, the Hewlett Packard 11970K Harmonic Mixer and the Hewlett Packard 11975A Amplifier were used to allow the spectrum analyzer to scan up to 25 GHz.

7.2 Radiated Emissions (Spurious and Harmonics) Test for Part 90

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, and the Com Power Microwave Preamplifier Model: PA-122 was used for frequencies above 1 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 video bandwidth was set at 300 kHz for spurious emissions below 1 GHz, and 3 MHz for spurious emissions above 1 GHz.

The sweep time was set to a time slow enough to maintain the measurement calibration of the spectrum analyzer.

The resolution bandwidths and transducers used for this test were:

FREQUENCY RANGE	EFFECTIVE MEASUREMENT BANDWIDTH	TRANSDUCER
9 kHz to 150 kHz	10 kHz	Active Loop Antenna
150 kHz to 30 MHz	10 kHz	Active Loop Antenna
30 MHz to 300 MHz	10 kHz	Biconical Antenna
300 MHz to 1 GHz	10 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: 1992. 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.

The substitution method was used to obtain the data as follows:

1. The EUT was mounted on an 80 cm high non-conductive table that was placed on the turntable. The EUT was terminated via a 50 ohm terminator.

2. The receiving antenna was mounted in a horizontal polarization and raised and lowered between 1 meter and 4 meters to obtain the maximum reading on the spectrum analyzer. Then the turntable was rotated 360 degrees to determine the maximum reading. This procedure was repeated to obtain the highest possible reading. The maximum reading was recorded.

3. Step #2 was repeated for the vertical polarization.

Radiated Emissions (Spurious and Harmonics) Test for Part 90 (continued)

4. The spectrum analyzer settings were kept as mentioned above.

5. The EUT was replaced with a substitution antenna. The center of the substitution antenna was placed approximately at the same location as the center of the EUT.

6. The substitution antenna was fed a signal from an external signal generator by means of a non-radiating cable. Both the substitution and receiving antenna were placed in the horizontal polarization. The signal generator was then tuned to the particular spurious frequency. The receiving antenna was then raised and lowered to obtain a maximum reading at the spectrum analyzer. The level of the signal generator output was then adjusted to match the previously recorded maximum reading obtained in step #2.

7. Step #6 was repeated for the vertical polarization.

8. The output of the signal generator was taken by connecting the non-radiating cable connected to the output of the signal generator to the spectrum analyzer. This was so that the loss of the non-radiating cable could be taken in to account. The reading measured by the spectrum analyzer was then recorded.

9. The gain of the substitution antenna was then added from the spectrum analyzer reading. This reading was then compared to the spec limit.

7.3 Radiated Emissions (Spurious and Harmonics) Limit for Part 90

The limits for radiated emissions are based on the power of the transmitter at the operating frequency.

For an operating power range of 0.505 watts, the radiated emissions limit for spurious signal outside of the assigned frequency block is 43+10 Log (mean output power in watts) dB below the measured amplitude at the operating power.

The measured effective radiated power of the EUT was 27.0 dBm (134.0 dBuV/m). The required attenuation is 43 + 10 log (3) or 47.8 dB. Thus, the limit for spurious and harmonic emissions is:

27.0 dBm (134.0 dBuV/m) – 40.0 dB = –13.0 dBm (94.0 dBuV/m) @ 3 meters

7.4 RF Power Output of the EUT

The RF Power Output for the EUT was taken using the Hewlett Packard 436A Power Meter and the Hewlett Packard 8482H Power Sensor. The low and high channels were taken.

Test Results:

7.5 Modulation Characteristics – Audio Frequency Response

This test was not performed because this test is not applicable to the EUT.

7.6 Modulation Characteristics – Audio Frequency Response

This test was not performed because this test is not applicable to the EUT.

7.7 Occupied Bandwidth for the EUT

The Occupied Bandwidth test was performed using the spectrum analyzer. The EUT was connected directly to the spectrum analyzer through two 10 dB attenuators (to protect the input of the spectrum analyzer). The spectrum analyzer was offset to account for the attenuators. The resolution bandwidth was set to 30 kHz, video bandwidth was set to 100 kHz and the trace was set to max hold.

Test Results:

The EUT complies with the limits of CFR Title 47, Part 90, section 90.210 (b).

7.8 Spurious Emissions at the Antenna Terminal

The spurious emissions at the antenna terminal were performed using the spectrum analyzer. The test was measured using a direct connection from the RF out port of the EUT into the input of the analyzer through two 10 dB attenuators (to protect the input of the spectrum analyzer). The spectrum analyzer was offset to account for the attenuators. The resolution and video bandwidths were both 100 kHz. The spans were wide enough to include all the harmonics and emissions that were produced by the antenna terminal.

Test Results:

The EUT complies with the limits of CFR Title 47, Part 90, section 90.210 (b).

7.9 Frequency Stability

The EUT was placed inside a temperature chamber and the spectrum analyzer was connected directly to the antenna terminal. The test was performed from -30ºC to +50ºC at intervals of 10ºC. Dwell time at each temperature was 20 minutes minimum. Also, at +20ºC the input DC voltage to the EUT was varied between 85% (5.95 Volts) and 115% (8.05 volts).

Test Results:

The EUT complies with the requirements of CFR Title 47, Part 90, section 90.213.

8. CONCLUSIONS

The 2.4 GHz Video Transmitter Model: SSIVTX01 meets all of the **Class B** specification limits defined by CFR Title 47, Part 15, Subpart B; and CFR Title 47, Part 90, Subpart I.

APPENDIX A

LABORATORY RECOGNITIONS

LABORATORY RECOGNITIONS

Compatible Electronics has the following agency accreditations:

National Voluntary Laboratory Accreditation Program - Lab Code: 200063-0

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 Part 15 and/or FCC Part 90 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	2.4 GHz Video Transmitter Model: SSIVTX01 S/N: N/A

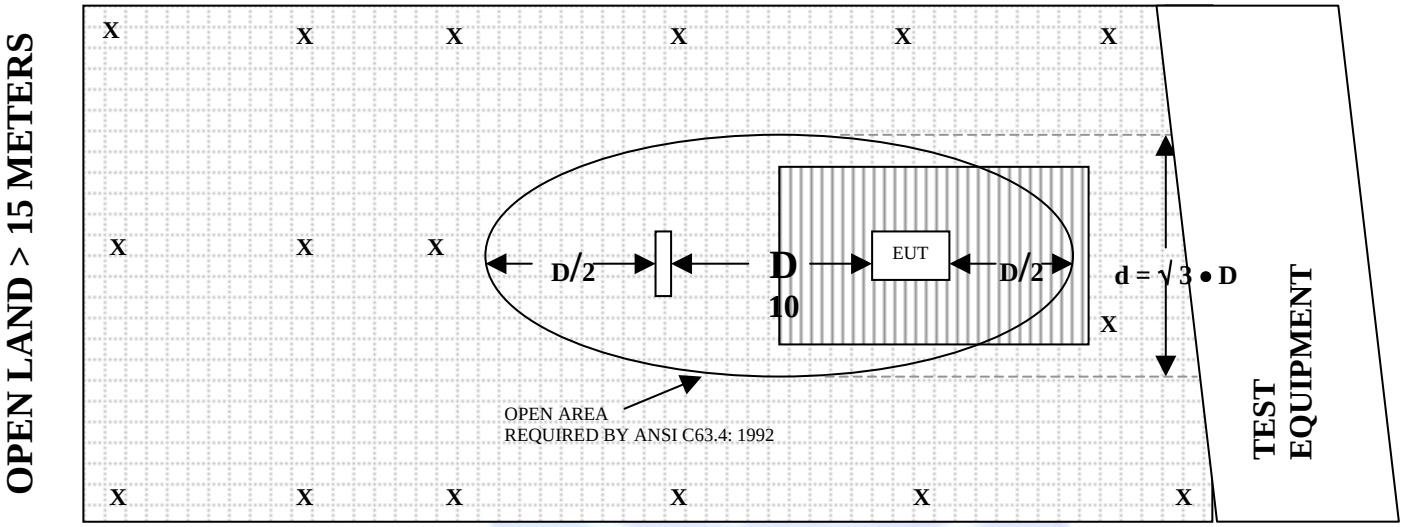
No additional models were covered under this report.

APPENDIX D

DIAGRAMS, CHARTS, AND PHOTOS

FIGURE 1: PLOT MAP AND LAYOUT OF RADIATED SITE

OPEN LAND > 15 METERS



OPEN LAND > 15 METERS

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

COM-POWER AB-100

BICONICAL ANTENNA

S/N: 01548

CALIBRATION DATE: OCTOBER 11, 2001

FREQUENCY (MHz)	FACTOR (dB)	FREQUENCY (MHz)	FACTOR (dB)
30	13.70	120	11.00
35	13.70	125	11.20
40	11.80	140	12.50
45	12.30	150	13.20
50	11.00	160	13.50
60	10.40	175	14.60
70	8.60	180	14.40
80	8.30	200	15.90
90	8.30	250	17.60
100	8.80	300	19.90

COM-POWER AL-100

LOG PERIODIC ANTENNA

S/N: 16089

CALIBRATION DATE: OCTOBER 11, 2001

FREQUENCY (MHz)	FACTOR (dB)	FREQUENCY (MHz)	FACTOR (dB)
300	14.10	700	20.60
400	15.10	800	22.40
500	16.60	900	22.70
600	19.90	1000	26.50

COM-POWER PA-102

PREAMPLIFIER

S/N: 1017

CALIBRATION DATE: DECEMBER 31, 2001

FREQUENCY (MHz)	FACTOR (dB)	FREQUENCY (MHz)	FACTOR (dB)
30	38.5	300	38.5
40	38.5	350	38.4
50	38.5	400	38.2
60	38.5	450	37.8
70	38.5	500	38.0
80	38.5	550	38.2
90	38.3	600	38.2
100	38.3	650	38.0
125	38.6	700	38.1
150	38.5	750	37.7
175	38.4	800	37.4
200	38.5	850	37.9
225	38.5	900	37.2
250	38.4	950	36.8
275	38.4	1000	37.3

COM-POWER PA-122

MICROWAVE PREAMPLIFIER

S/N: 25195

CALIBRATION DATE: JANUARY 7, 2002

FREQUENCY (GHz)	FACTOR (dB)	FREQUENCY (GHz)	FACTOR (dB)
1.0	33.7	9.5	31.8
1.1	33.4	10.0	32.2
1.2	33.1	11.0	31.4
1.3	33.1	12.0	30.2
1.4	33.2	13.0	32.9
1.5	32.5	14.0	33.9
1.6	32.7	15.0	32.4
1.7	32.3	16.0	32.2
1.8	32.3	17.0	31.5
1.9	31.4	18.0	32.2
2.0	32.8	19.0	31.2
2.5	33.3	20.0	31.3
3.0	31.7	21.0	31.7
3.5	31.6	22.0	29.7
4.0	31.2		
4.5	31.2		
5.0	31.0		
5.5	31.3		
6.0	32.1		
6.5	32.1		
7.0	31.8		
7.5	32.0		
8.0	33.1		
8.5	32.0		
9.0	30.8		

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 3, 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

FRONT VIEW

SEARCH SYSTEMS, INC.
2.4 GHz VIDEO TRANSMITTER
MODEL: SSIVTX01
FCC PART 90 AND SUBPART B - RADIATED EMISSIONS – 7-10-02

PHOTOGRAPH SHOWING THE EUT CONFIGURATION FOR MAXIMUM EMISSIONS

REAR VIEW

SEARCH SYSTEMS, INC.
2.4 GHz VIDEO TRANSMITTER
MODEL: SSIVTX01
FCC PART 90 AND SUBPART B - RADIATED EMISSIONS – 7-10-02

PHOTOGRAPH SHOWING THE EUT CONFIGURATION FOR MAXIMUM EMISSIONS

APPENDIX E

DATA SHEETS

RF OUTPUT POWER

DATA SHEETS

PEAK OUTPUT POWER

SEARCH SYSTEMS, INC.

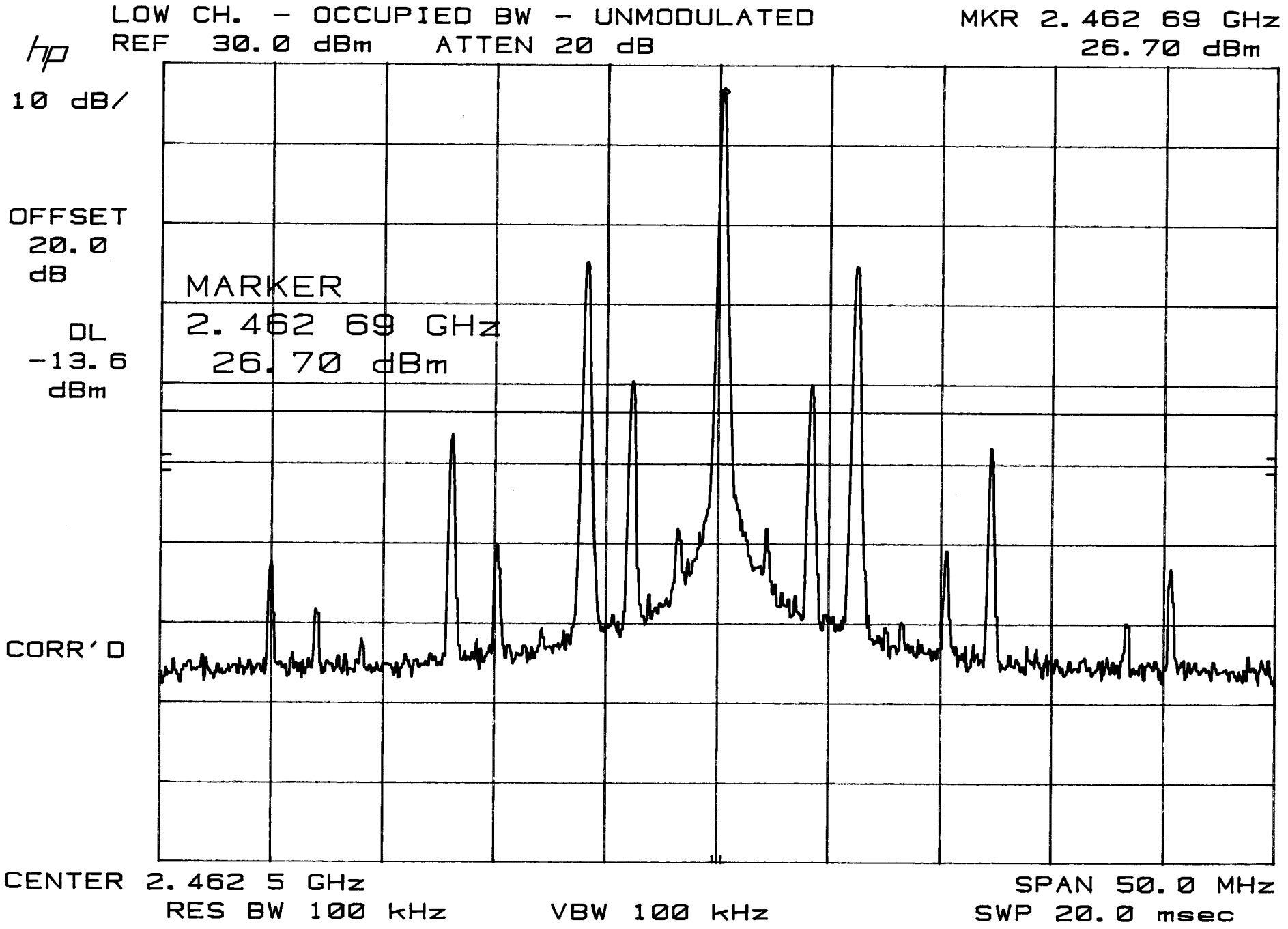
2.4 GHz VIDEO TRANSMITTER

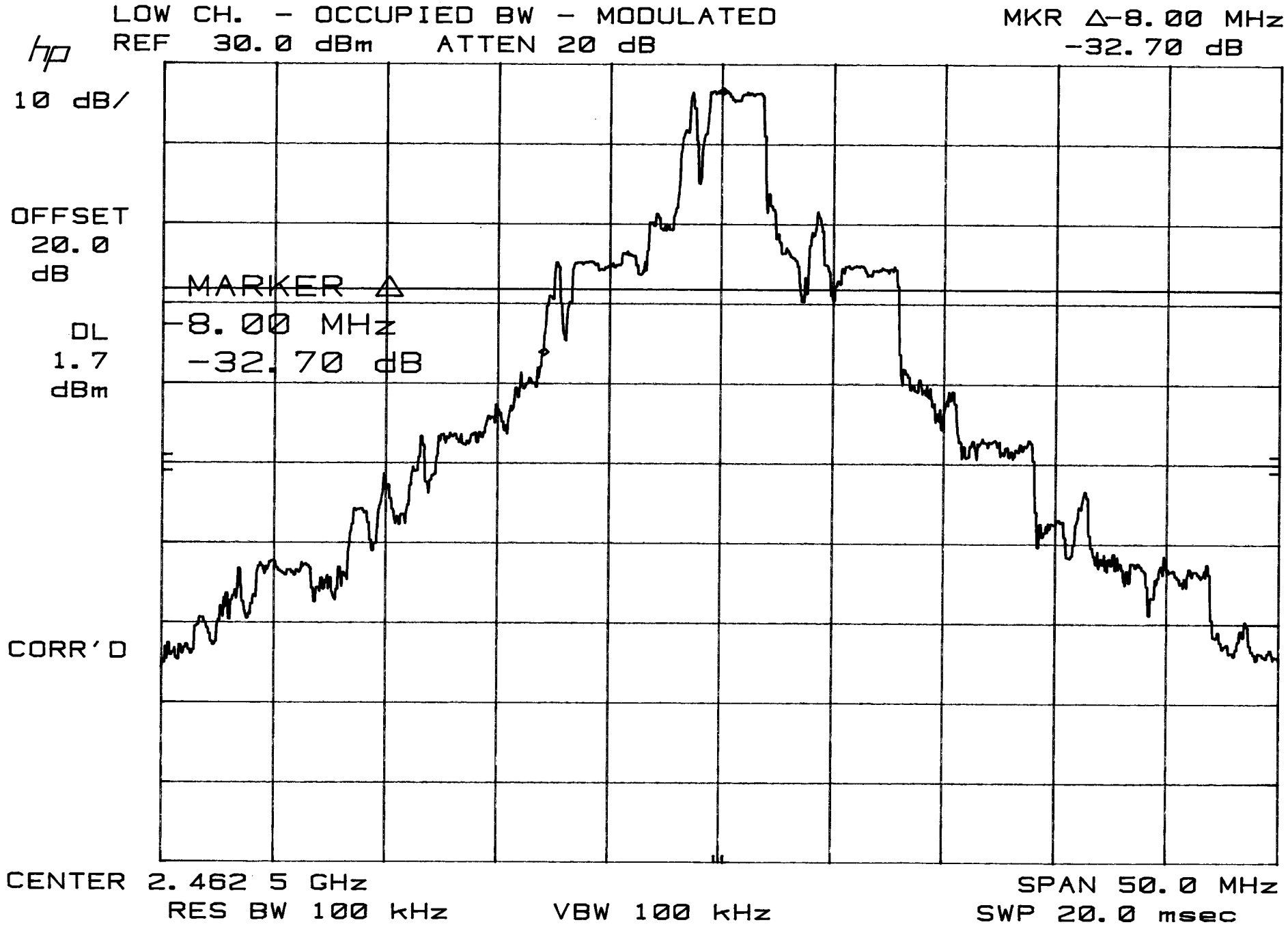
MODEL: SSIVTX01

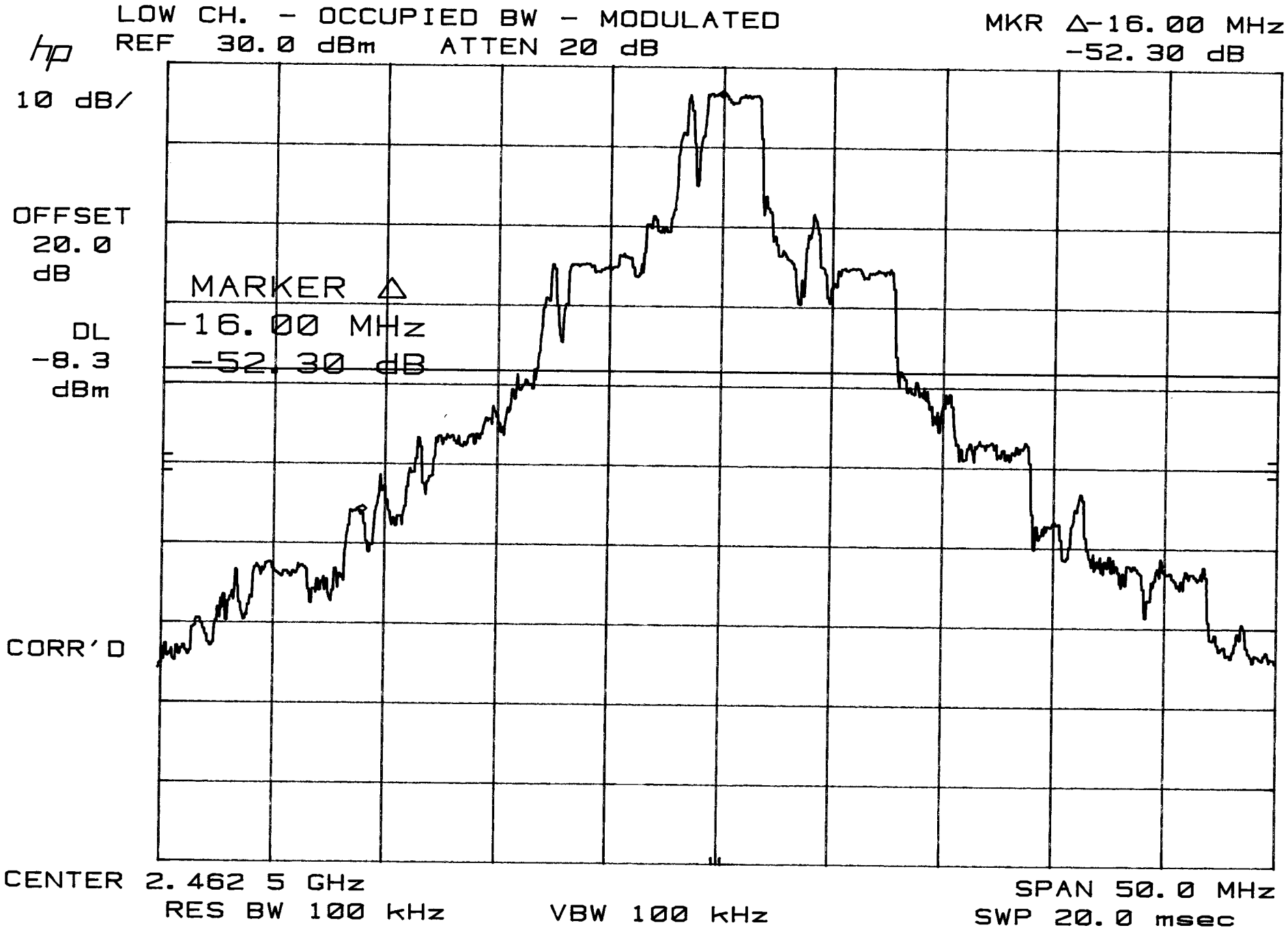
CHANNEL	PEAK POWER OUTPUT (Watts)
LOW	0.505
HIGH	0.479

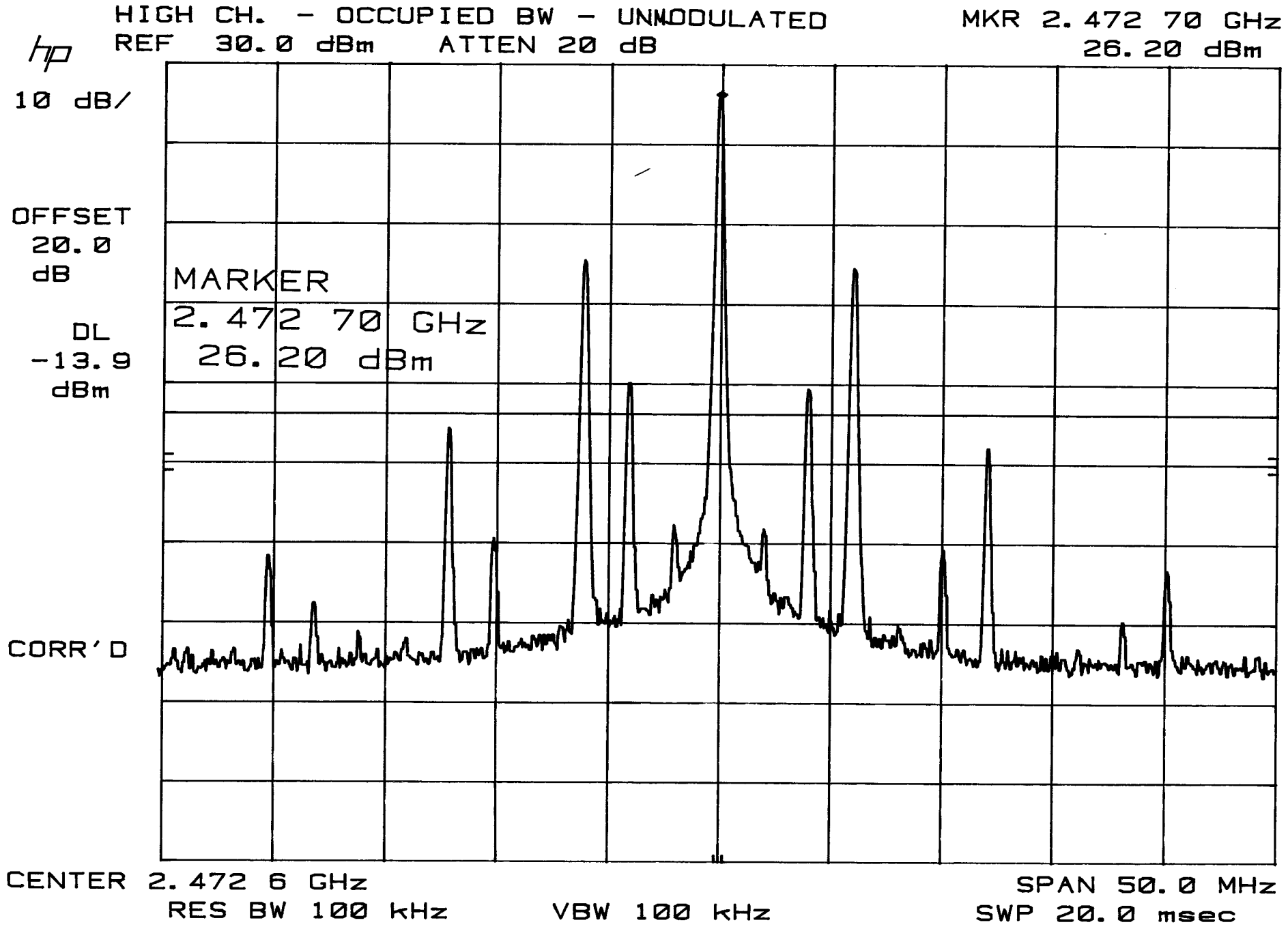
OCCUPIED BANDWIDTH

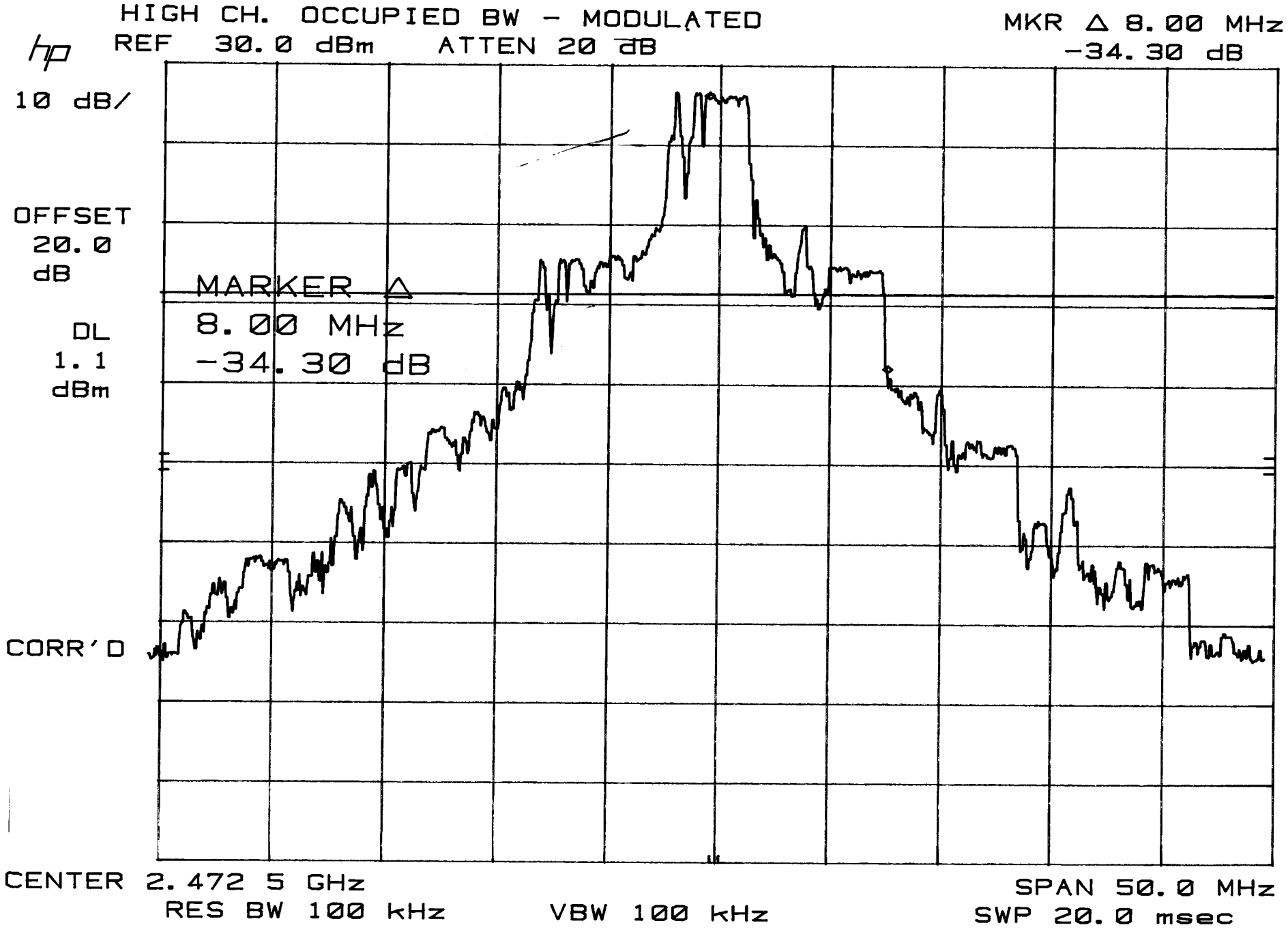
DATA SHEETS

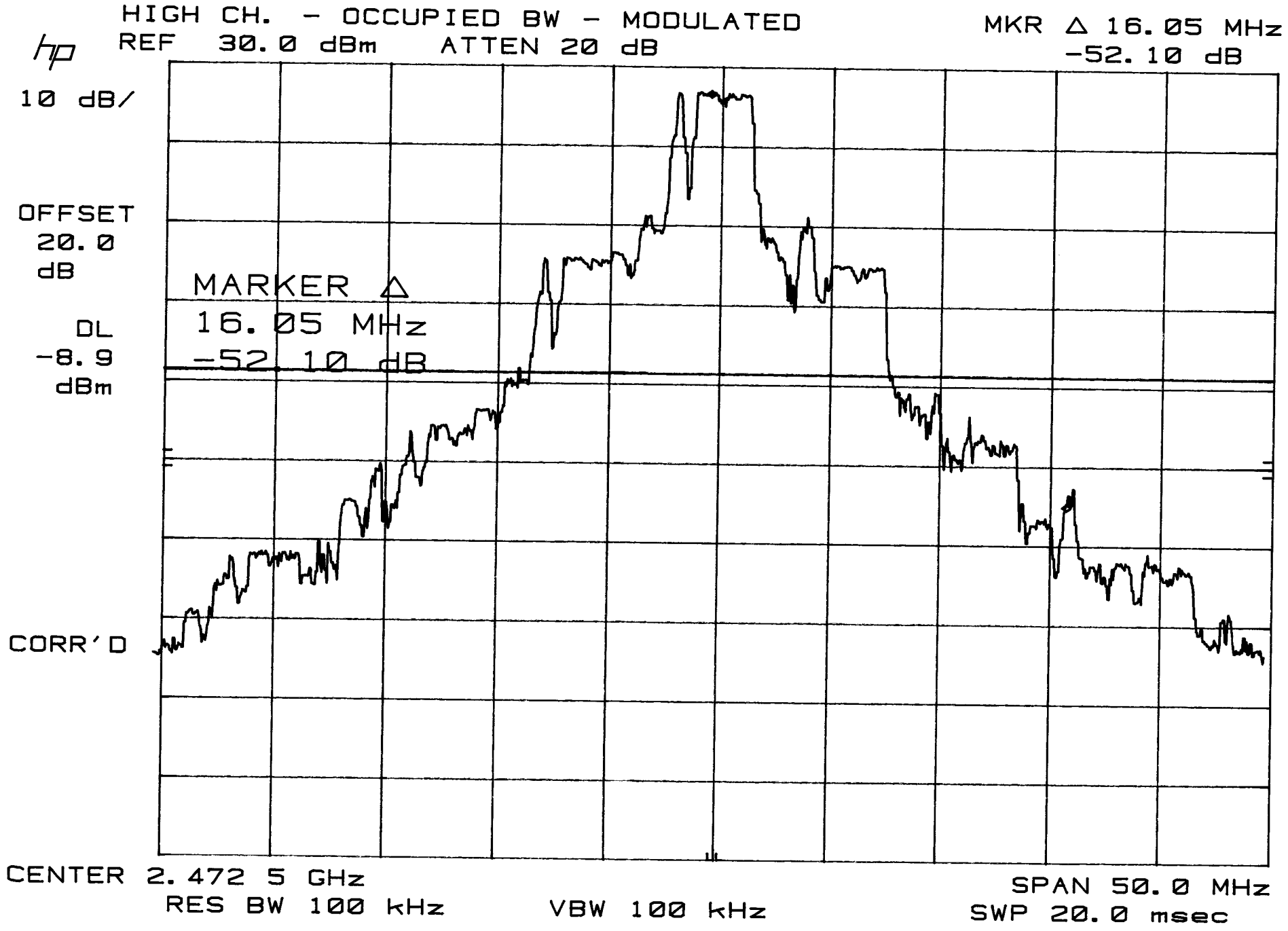

LOW CH. - OCCUPIED BW - UNMODULATED
MKR 2.462 69 GHz
REF 30.0 dBm
ATTEN 20 dB
26.70 dBm
10 dB/
OFFSET
20.0
dB
MARKER
2.462 69 GHz
26.70 dBm
DL
-13.6
dBm
CORR'D
CENTER 2.462 5 GHz
SPAN 50.0 MHz
RES BW 100 kHz
VBW 100 kHz
SWP 20.0 msec

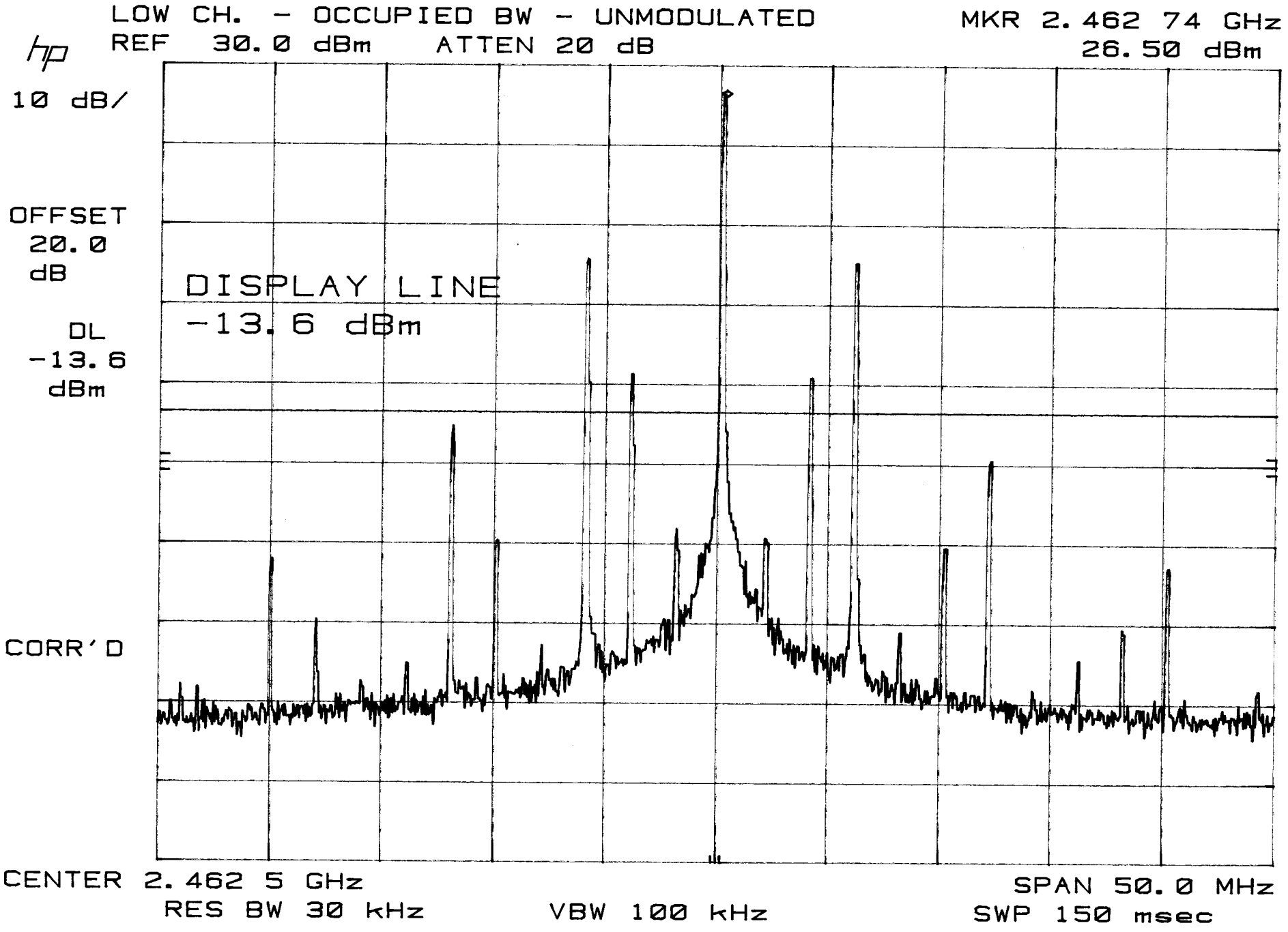

LOW CH. - OCCUPIED BW - MODULATED
REF 30.0 dBm ATTEN 20 dB
MKR Δ-8.00 MHz
-32.70 dB
10 dB/
OFFSET
20.0
dB
MARKER Δ
-8.00 MHz
-32.70 dB
DL
1.7
dBm
CORR'D
CENTER 2.462 5 GHz
SPAN 50.0 MHz
RES BW 100 kHz
VBW 100 kHz
SWP 20.0 msec

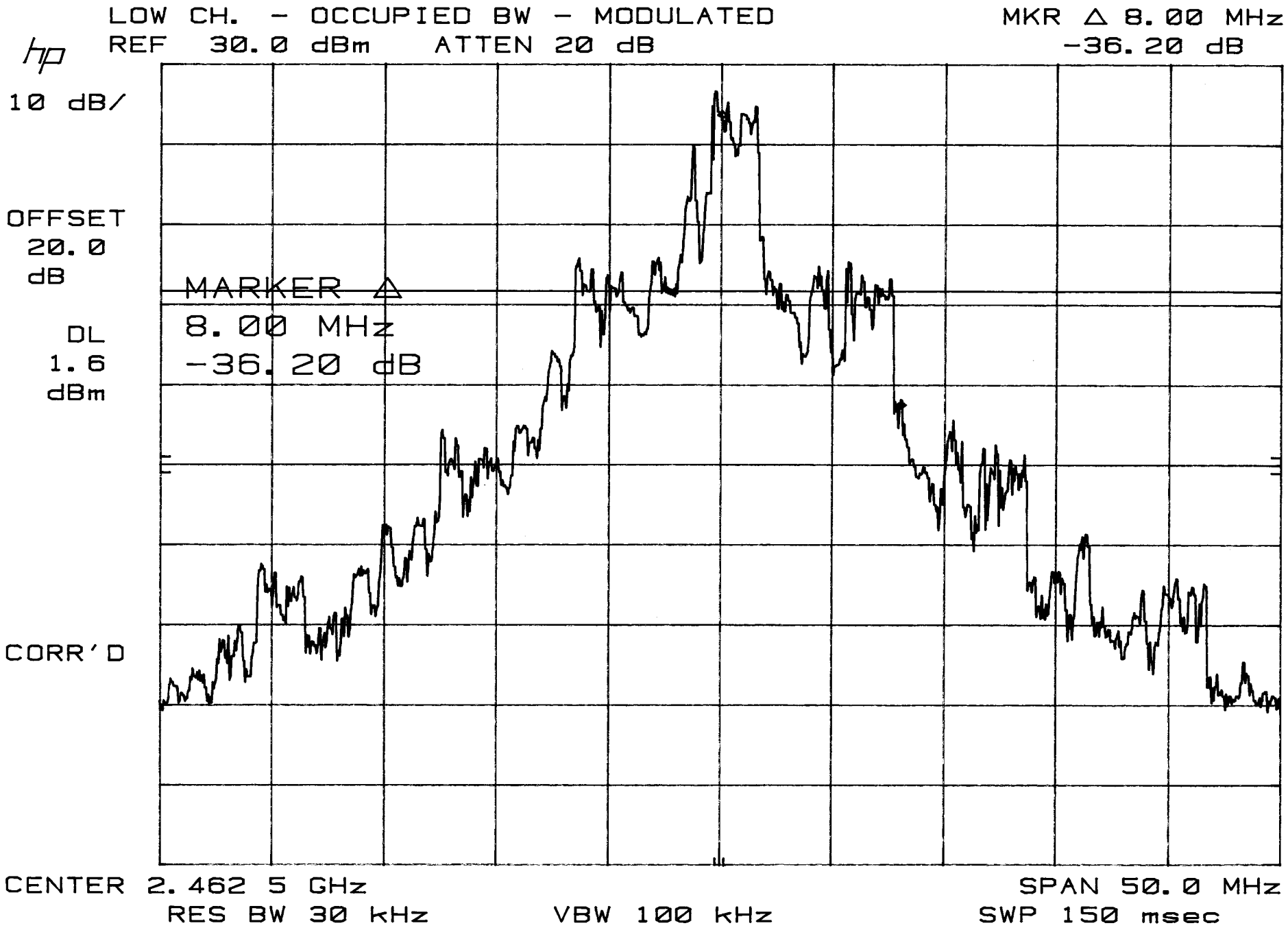

LOW CH. - OCCUPIED BW - MODULATED
REF 30.0 dBm ATTEN 20 dB
MKR Δ-16.00 MHz
-52.30 dB
10 dB/
OFFSET
20.0
dB
MARKER Δ
-16.00 MHz
-52.30 dB
DL
-8.3
dBm
CORR'D
CENTER 2.462 5 GHz
RES BW 100 kHz
VBW 100 kHz
SPAN 50.0 MHz
SWP 20.0 msec

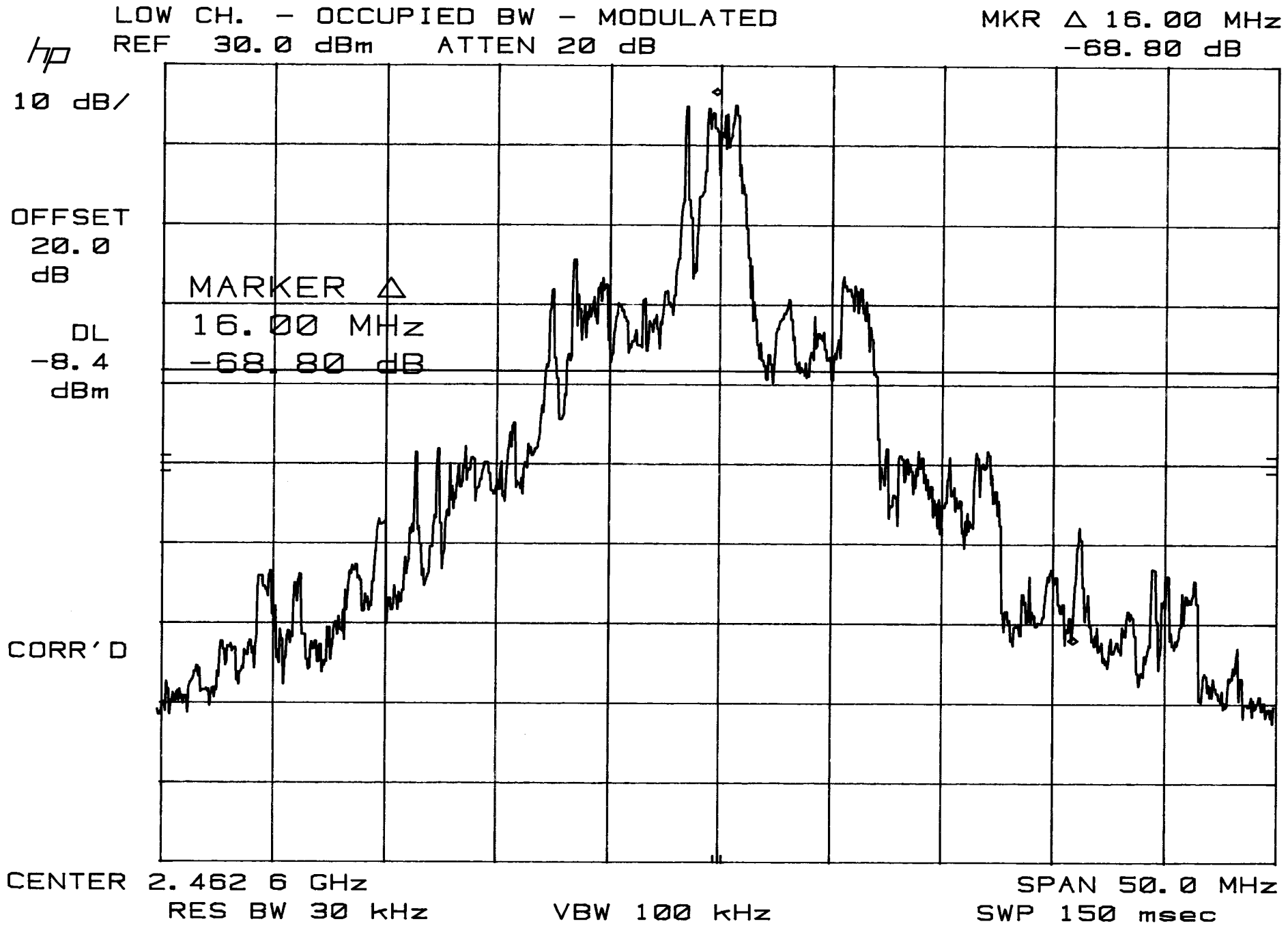

HIGH CH. - OCCUPIED BW - UNMODULATED
REF 30.0 dBm ATTEN 20 dB
MKR 2.472 70 GHz
26.20 dBm
10 dB/
OFFSET
20.0
dB
MARKER
2.472 70 GHz
26.20 dBm
DL
-13.9
dBm
CORR'D
CENTER 2.472 6 GHz
RES BW 100 kHz
VBW 100 kHz
SPAN 50.0 MHz
SWP 20.0 msec

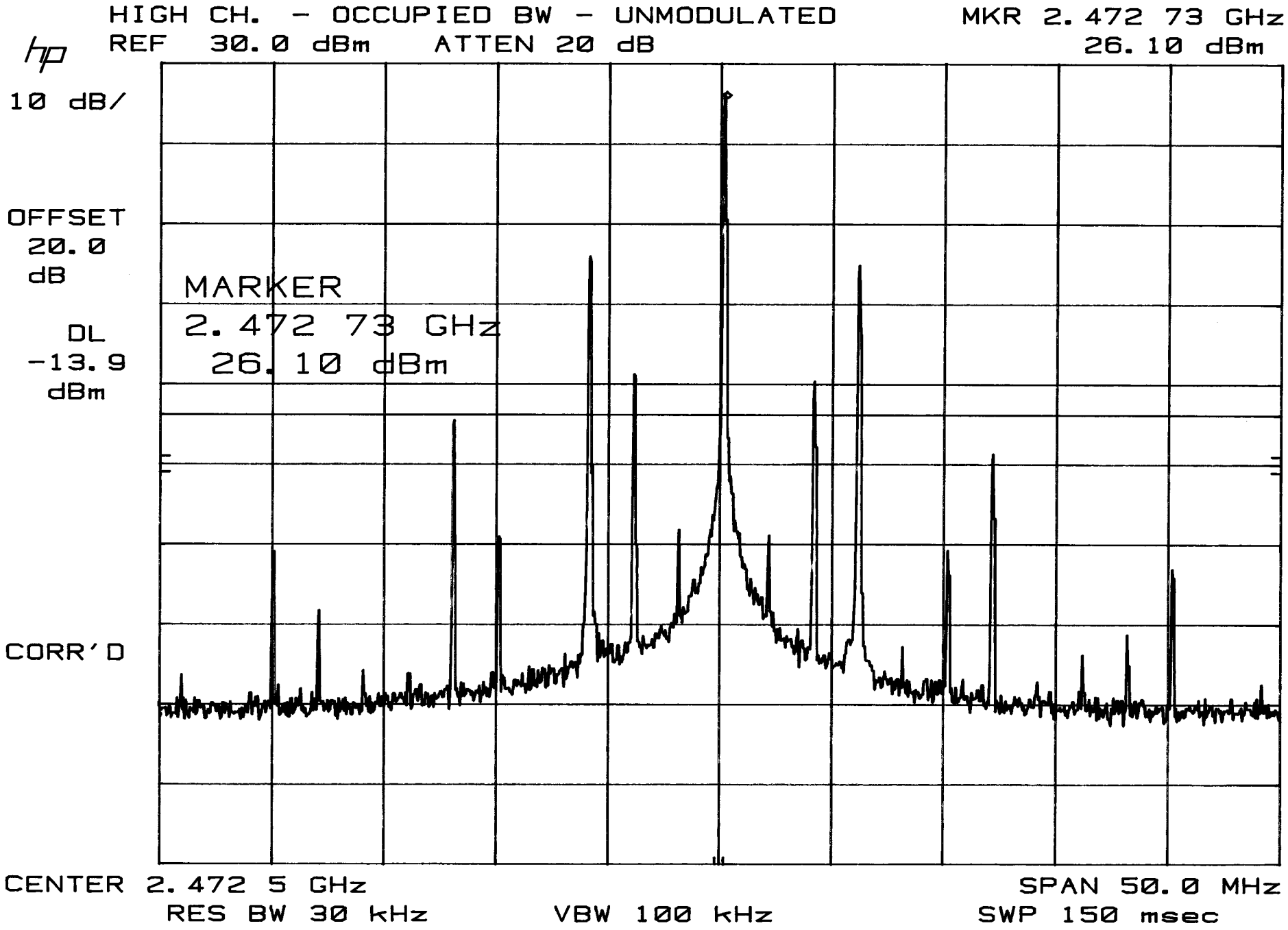

HIGH CH. OCCUPIED BW - MODULATED
REF 30.0 dBm
ATTEN 20 dB
MKR Δ 8.00 MHz
-34.30 dB
10 dB/
OFFSET
20.0
dB
MARKER Δ
8.00 MHz
-34.30 dB
DL
1.1
dBm
CORR'D
CENTER 2.472 5 GHz
RES BW 100 kHz
VBW 100 kHz
SPAN 50.0 MHz
SWP 20.0 msec

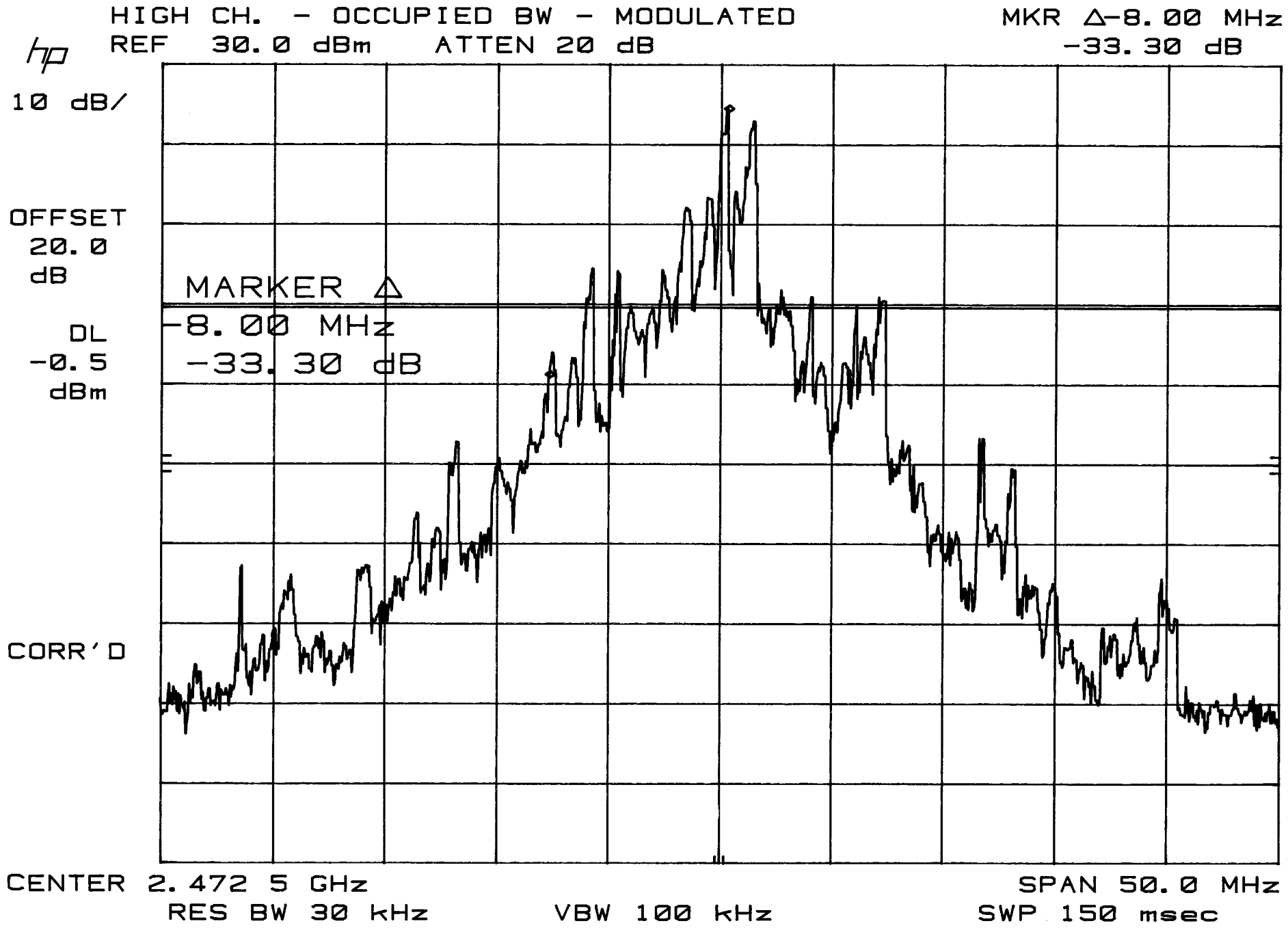

HIGH CH. - OCCUPIED BW - MODULATED
REF 30.0 dBm ATTEN 20 dB
MKR Δ 16.05 MHz
-52.10 dB
10 dB/
OFFSET
20.0
dB
MARKER Δ
16.05 MHz
-52.10 dB
DL
-8.9
dBm
CORR'D
CENTER 2.472 5 GHz
RES BW 100 kHz
VBW 100 kHz
SPAN 50.0 MHz
SWP 20.0 msec

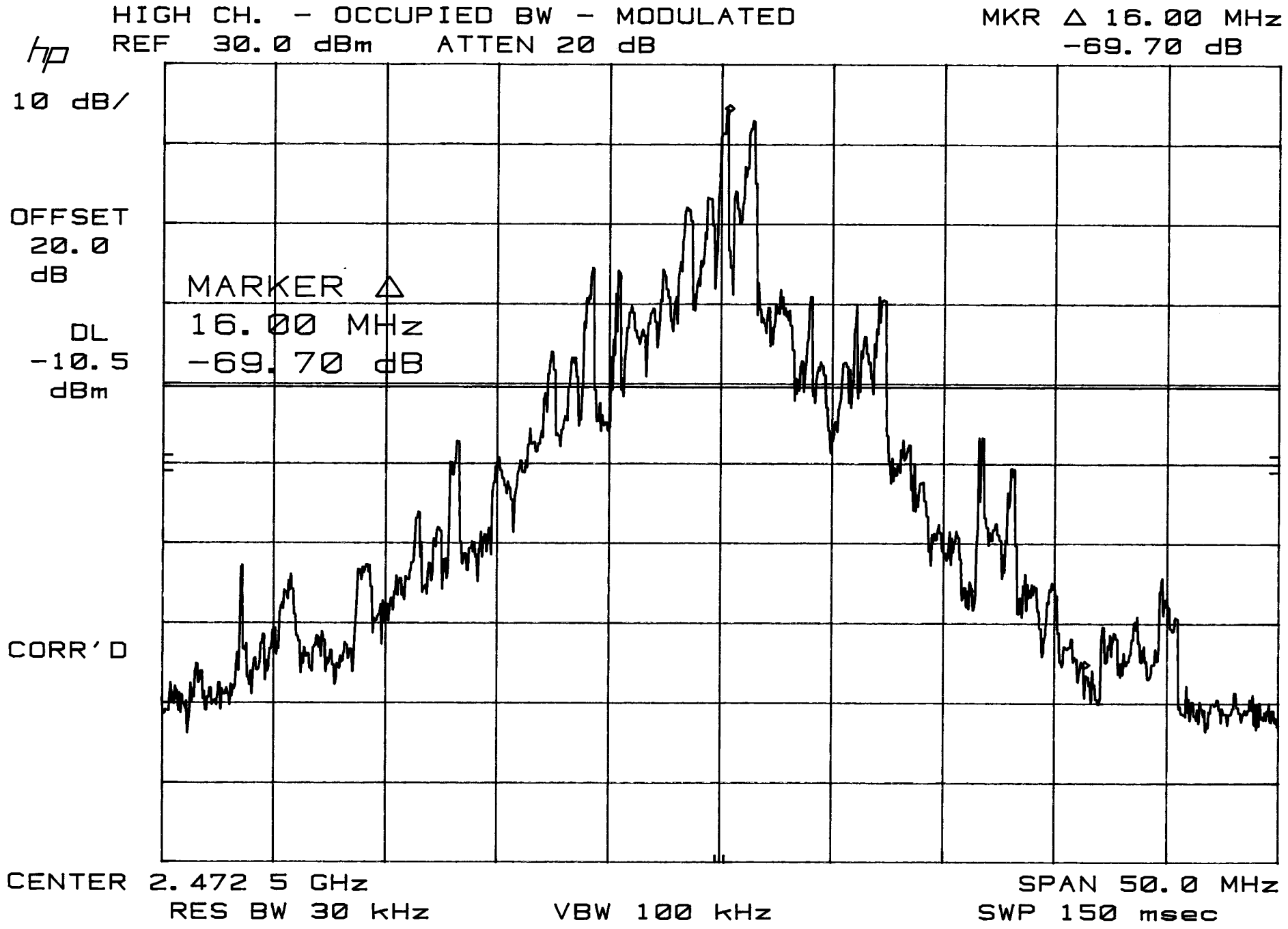

LOW CH. - OCCUPIED BW - UNMODULATED
REF 30.0 dBm ATTEN 20 dB
MKR 2.462 74 GHz
26.50 dBm
10 dB/
OFFSET
20.0
dB
DISPLAY LINE
-13.6 dBm
DL
-13.6
dBm
CORR'D
CENTER 2.462 5 GHz
RES BW 30 kHz
VBW 100 kHz
SPAN 50.0 MHz
SWP 150 msec


LOW CH. - OCCUPIED BW - MODULATED
REF 30.0 dBm ATTEN 20 dB
MKR Δ 8.00 MHz
-36.20 dB
10 dB/
OFFSET
20.0
dB
MARKER Δ
8.00 MHz
-36.20 dB
DL
1.6
dBm
CORR'D
CENTER 2.462 5 GHz
SPAN 50.0 MHz
RES BW 30 kHz
VBW 100 kHz
SWP 150 msec


LOW CH. – OCCUPIED BW – MODULATED
REF 30.0 dBm ATTEN 20 dB
MKR Δ 16.00 MHz
-68.80 dB
10 dB/
OFFSET
20.0
dB
DL
-8.4
dBm
MARKER Δ
16.00 MHz
-68.80 dB
CORR'D
CENTER 2.462 6 GHz
SPAN 50.0 MHz
RES BW 30 kHz
VBW 100 kHz
SWP 150 msec


HIGH CH. - OCCUPIED BW - UNMODULATED
MKR 2.472 73 GHz
REF 30.0 dBm
ATTEN 20 dB
26.10 dBm
10 dB/
OFFSET
20.0
dB
MARKER
2.472 73 GHz
26.10 dBm
DL
-13.9
dBm
CORR'D
CENTER 2.472 5 GHz
SPAN 50.0 MHz
RES BW 30 kHz
VBW 100 kHz
SWP 150 msec


HIGH CH. - OCCUPIED BW - MODULATED
REF 30.0 dBm ATTEN 20 dB
MKR Δ-8.00 MHz
-33.30 dB
10 dB/
OFFSET
20.0
dB
MARKER Δ
-8.00 MHz
-33.30 dB
DL
-0.5
dBm
CORR'D
CENTER 2.472 5 GHz
SPAN 50.0 MHz
RES BW 30 kHz
VBW 100 kHz
SWP 150 msec


HIGH CH. - OCCUPIED BW - MODULATED
REF 30.0 dBm ATTEN 20 dB
MKR Δ 16.00 MHz
-69.70 dB
10 dB/
OFFSET
20.0
dB
MARKER Δ
16.00 MHz
-69.70 dB
DL
-10.5
dBm
CORR'D
CENTER 2.472 5 GHz
SPAN 50.0 MHz
RES BW 30 kHz
VBW 100 kHz
SWP 150 msec

RADIATED EMISSIONS ON THE DIGITAL PORTION

DATA SHEETS

Page: 1 of 1

Test location: Compatible Electronics
Customer : SEARCH SYSTEMS, INC. Date : 8/ 5/2002
Manufacturer : SEARCH SYSTEMS, INC. Time : 8.27
EUT name : 2.4 GHZ VIDEO TRANSMITTER Model: SSIVTX01
Specification: Fcc_B Test distance: 3.0 mtrs Lab: D
Distance correction factor(20*log(test/spec)) : 0.00
Test Mode :
SPURIOUS EMISSIONS -- 30 MHz TO 25000 MHz
HORIZONTAL AND VERTICAL POLARIZATION
TEMPERATURE 68 DEGREES F., RELATIVE HUMIDITY 75%
TESTED BY: KYLE FUJIMOTO

Pol	Freq	Rdng	Cable loss	Ant factor	Amp gain	Cor'd rdg = R	limit = L	Delta R-L
	MHz	dBuV	dB	dB	dB	dBuV	dBuV/m	dB
VERTICAL POLARIZATION								
1V	120.00	46.70	1.76	11.00	38.54	20.92	43.50	-22.58
2V	200.88	35.50	2.40	15.93	38.50	15.33	43.50	-28.17
3V	224.04	37.10	2.50	16.72	38.50	17.81	46.00	-28.19
4V	536.76	34.90	4.32	17.81	38.15	18.89	46.00	-27.11
5V	554.16	37.20	4.41	18.39	38.20	21.80	46.00	-24.20
6V	583.20	36.40	4.47	19.35	38.20	22.01	46.00	-23.99
HORIZONTAL POLARIZATION								
7H	144.27	45.50	1.95	12.80	38.52	21.73	43.50	-21.77
8H	355.77	35.00	3.43	14.66	38.38	14.72	46.00	-31.28
9H	583.77	35.20	4.47	19.36	38.20	20.83	46.00	-25.17
10H	624.15	37.30	4.60	20.07	38.10	23.86	46.00	-22.14

NO OTHER SPURIOUS EMISSIONS FOUND FROM THE DIGITAL PORTION AFTER 624.15 MHz
IN EITHER POLARIZATION FOR THE EUT

Page: 1 of 1

Test location: Compatible Electronics
Customer : SEARCH SYSTEMS, INC. Date : 8/ 5/2002
Manufacturer : SEARCH SYSTEMS, INC. Time : 12.27
EUT name : 2.4 GHZ VIDEO TRANSMITTER Model: SSIVTX01
Specification: Fcc_B Test distance: 3.0 mtrs Lab: D
Distance correction factor(20*log(test/spec)) : 0.00
Test Mode :
SPURIOUS EMISSIONS -- 10 kHz TO 30 MHz
HORIZONTAL AND VERTICAL POLARIZATION
TEMPERATURE 77 DEGREES F., RELATIVE HUMIDITY 53%
TESTED BY: KYLE FUJIMOTO

NO SPURIOUS EMISSIONS FOUND FROM THE DIGITAL PORTION FROM 10 kHz TO 30 MHz IN EITHER POLARIZATION FOR THE EUT

RADIATED SPURIOUS EMISSIONS ON THE TRANSMITTER PORTION DATA SHEETS

FCC 22.917 (e) - Spurious Radiated Emissions

Search Systems, Inc. Date: 08/01/02

2.4 GHz Video Transmitter Lab: D

Model: SSIVTX01 Tested By: Kyle Fujimoto

Test Description: Using the Substitution Method - Low Channel - Horizontal Polarization

Freq. (MHz)	Field Strength Generated by the EUT (dBuV/m)	Signal Generator Level required to generate same field as EUT; dBm	Ant. Gain (dBi)	ERP (dBi)	Attenuation (dB)	Attenuation Limit (dB)	Margin (dB)
2462	--	--	--	27	--	--	--
4924	79.6	-26.2	10.5	-15.7	42.7	40	-2.7
7386	78.3	-29.9	7.4	-22.5	49.5	40	-9.5
9848	68.1	-38.6	8.4	-30.2	57.2	40	-17.2

Note: Please see the Spurious Emissions Data Sheets for the field strength of the above emissions before doing the substitution method

Attenuation Limit is based on the Formula 43+10 Log (P), with P being the mean power of the unmodulated carrier
Note: P = .505 Watts
43+10 Log (.505) = 40.0 Attenuation Required

FCC 22.917 (e) - Spurious Radiated Emissions

Search Systems, Inc. Date: 08/01/02

2.4 GHz Video Transmitter Lab: D

Model: SSIVTX01 Tested By: Kyle Fujimoto

Test Description: Using the Substitution Method - High Channel - Horizontal Polarization

Freq. (MHz)	Field Strength Generated by the EUT (dBuV/m)	Signal Generator Level required to generate same field as EUT; dBm	Ant. Gain (dBi)	ERP (dBi)	Attenuation (dB)	Attenuation Limit (dB)	Margin (dB)
2472	--	--	--	27	--	--	--
4944	79.6	-24.9	10.5	-14.4	41.4	40	-1.4
7416	72.8	-33.8	7.4	-26.4	53.4	40	-13.4
9888	70.7	-35.2	8.4	-26.8	53.8	40	-13.8

Note: Please see the Spurious Emissions Data Sheets for the field strength of the above emissions before doing the substitution method

Attenuation Limit is based on the Formula 43+10 Log (P), with P being the mean power of the unmodulated carrier
Note: P = .505 Watts
43+10 Log (.505) = 40.0 Attenuation Required

FCC 22.917 (e) - Spurious Radiated Emissions

Search Systems, Inc. Date: 08/01/02

2.4 GHz Video Transmitter Lab: D

Model: SSIVTX01 Tested By: Kyle Fujimoto

Test Description: Using the Substitution Method - Low Channel - Vertical Polarization

Freq. (MHz)	Field Strength Generated by the EUT (dBuV/m)	Signal Generator Level required to generate same field as EUT; dBm	Ant. Gain (dBi)	ERP (dBi)	Attenuation (dB)	Attenuation Limit (dB)	Margin (dB)
2462	--	--	--	27	--	--	--
4924	77.0	-29.7	10.5	-19.2	46.2	40	-6.2
7386	76.1	-32.5	7.4	-25.1	52.1	40	-12.1
9848	64.9	-47.2	8.4	-38.8	65.8	40	-25.8

Note: Please see the Spurious Emissions Data Sheets for the field strength of the above emissions before doing the substitution method

Attenuation Limit is based on the Formula 43+10 Log (P), with P being the mean power of the unmodulated carrier
Note: P = .505 Watts
43+10 Log (.505) = 40.0 Attenuation Required

FCC 22.917 (e) - Spurious Radiated Emissions

Search Systems, Inc. Date: 08/01/02

2.4 GHz Video Transmitter Lab: D

Model: SSIVTX01 Tested By: Kyle Fujimoto

Test Description: Using the Substitution Method - High Channel - Vertical Polarization

Freq. (MHz)	Field Strength Generated by the EUT (dBuV/m)	Signal Generator Level required to generate same field as EUT; dBm	Ant. Gain (dBi)	ERP (dBi)	Attenuation (dB)	Attenuation Limit (dB)	Margin (dB)
2472	--	--	--	27	--	--	--
4944	77.3	-27.2	10.5	-16.7	43.7	40	-3.7
7416	70.1	-38.1	7.4	-30.7	57.7	40	-17.7
9888	67.4	-42.6	8.4	-34.2	61.2	40	-21.2

Note: Please see the Spurious Emissions Data Sheets for the field strength of the above emissions before doing the substitution method

Attenuation Limit is based on the Formula 43+10 Log (P), with P being the mean power of the unmodulated carrier
Note: P = .505 Watts
43+10 Log (.505) = 40.0 Attenuation Required

RADIATED EMISSIONS (FCC PART 2 AND 90)

COMPANY	**SEARCH SYSTEMS, INC.**	**DATE**	**8/1/02**	
EUT	**2.4 GHz VIDEO TRANSMITTER**	**DUTY CYCLE**	**N/A**	**%**
MODEL	**SSIVTX01**	**PEAK TO AVG**	**N/A**	**dB**
S/N	**N/A**	**TEST DIST.**	**3**	**Meters**
TEST ENGINEER	**KYLE FUJIMOTO**	**LAB**	**D**	

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
4924.0000	71.6	A	H	1.0	135	X	LOW	35.4	5.6	31.0	0.0	0.0	**81.7**	**-12.3**	**94.0**	**ANTENNA METHOD**
4924.0000	71.2	A	V	1.0	135	X	LOW	35.4	5.6	31.0	0.0	0.0	**81.3**	**-12.7**	**94.0**	**ANTENNA METHOD**
4944.0000	71.4	A	H	1.0	180	X	HIGH	35.5	5.7	31.0	0.0	0.0	**81.6**	**-12.4**	**94.0**	**ANTENNA METHOD**
4944.0000	69.4	A	V	1.0	135	X	HIGH	35.5	5.7	31.0	0.0	0.0	**79.6**	**-14.4**	**94.0**	**ANTENNA METHOD**

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

** DELTA = SPEC LIMIT - CORRECTED READING

RADIATED EMISSIONS (FCC PART 2 AND 90)

COMPANY	**SEARCH SYSTEMS, INC.**	**DATE**	**8/1/02**	
EUT	**2.4 GHz VIDEO TRANSMITTER**	**DUTY CYCLE**	**N/A**	**%**
MODEL	**SSIVTX01**	**PEAK TO AVG**	**N/A**	**dB**
S/N	**N/A**	**TEST DIST.**	**3**	**Meters**
TEST ENGINEER	**KYLE FUJIMOTO**	**LAB**	**D**	

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
7386.0000	61.5	A	H	1.0	90	X	LOW	40.8	8.0	32.0	0.0	0.0	**78.3**	**-15.7**	**94.0**	**ANTENNA METHOD**
7386.0000	59.3	A	V	1.0	90	X	LOW	40.8	8.0	32.0	0.0	0.0	**76.1**	**-17.9**	**94.0**	**ANTENNA METHOD**
7416.0000	56.1	A	H			X	HIGH	40.8	7.9	32.0	0.0	0.0	**72.8**	**-21.2**	**94.0**	**ANTENNA METHOD**
7416.0000	53.4	A	V	1.0	180	X	HIGH	40.8	7.9	32.0	0.0	0.0	**70.1**	**-23.9**	**94.0**	**ANTENNA METHOD**

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

** DELTA = SPEC LIMIT - CORRECTED READING

RADIATED EMISSIONS (FCC PART 2 AND 90)

COMPANY	**SEARCH SYSTEMS, INC.**	**DATE**	**8/1/02**	
EUT	**2.4 GHz VIDEO TRANSMITTER**	**DUTY CYCLE**	**N/A**	**%**
MODEL	**SSIVTX01**	**PEAK TO AVG**	**N/A**	**dB**
S/N	**N/A**	**TEST DIST.**	**3**	**Meters**
TEST ENGINEER	**KYLE FUJIMOTO**	**LAB**	**D**	

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
9848.0000	48.6	A	H	1.0	90	X	LOW	42.0	9.6	32.1	0.0	0.0	**68.2**	**-25.8**	**94.0**	**ANTENNA METHOD**
9848.0000	45.3	A	V	1.0	90	X	LOW	42.0	9.6	32.1	0.0	0.0	**64.9**	**-29.1**	**94.0**	**ANTENNA METHOD**
9888.0000	51.0	A	H	1.0	135	X	HIGH	42.1	9.7	32.1	0.0	0.0	**70.7**	**-23.3**	**94.0**	**ANTENNA METHOD**
9888.0000	47.7	A	V	1.0	180	X	HIGH	42.1	9.7	32.1	0.0	0.0	**67.4**	**-26.6**	**94.0**	**ANTENNA METHOD**

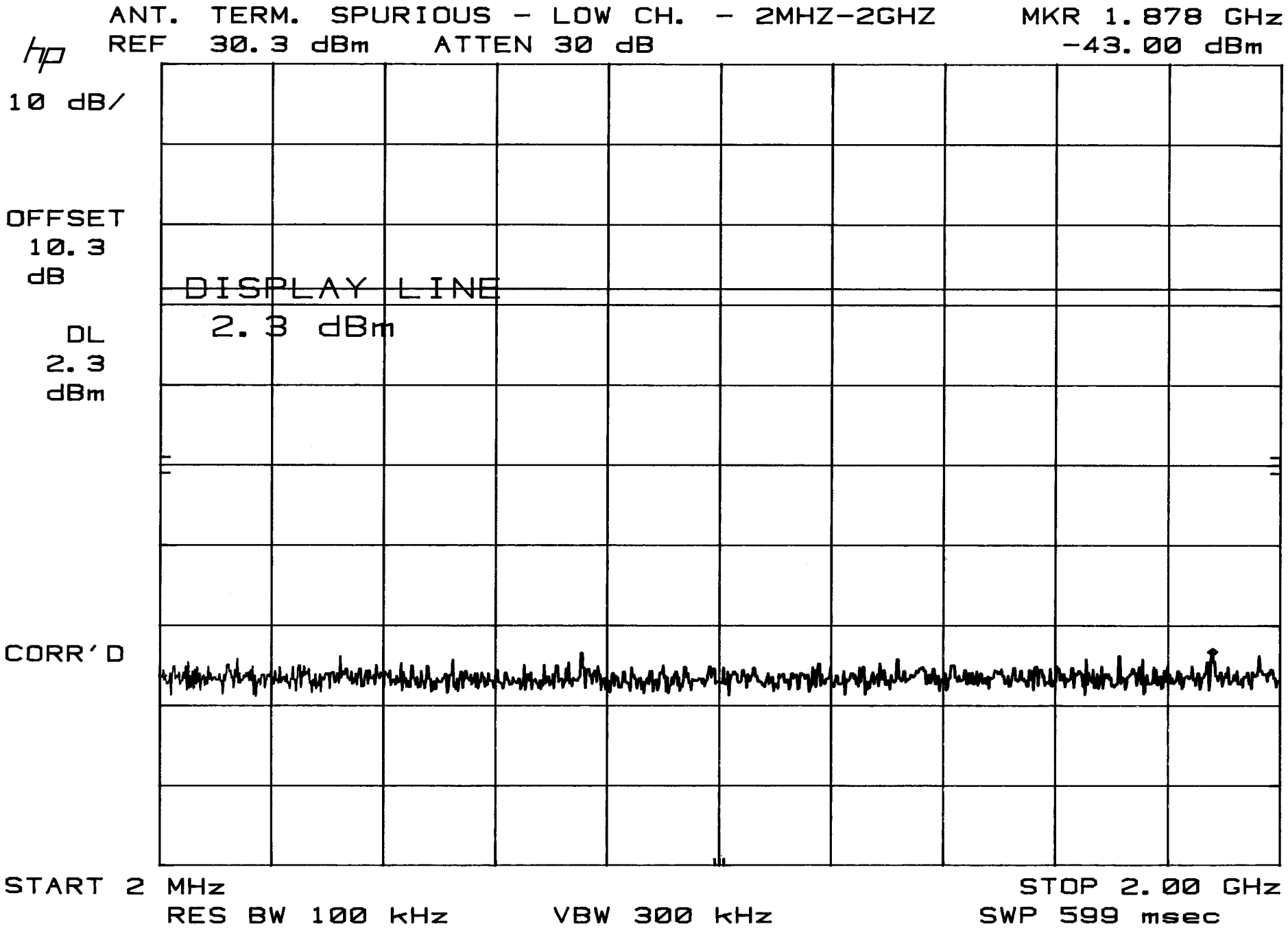
* CORRECTED READING = METER READING + ANTENNA FACTOR + CABLE LOSS - AMPLIFIER GAIN

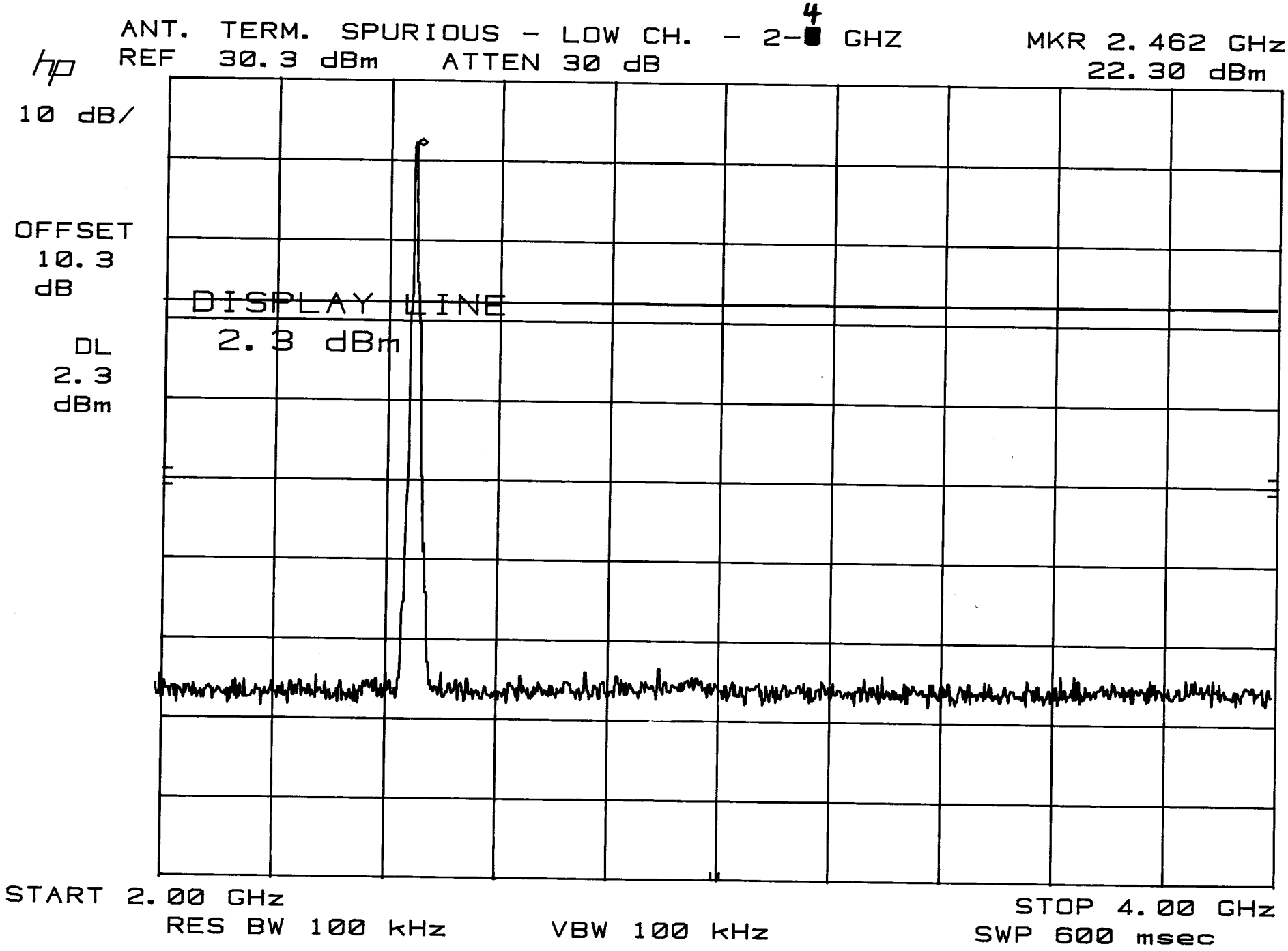
** DELTA = SPEC LIMIT - CORRECTED READING

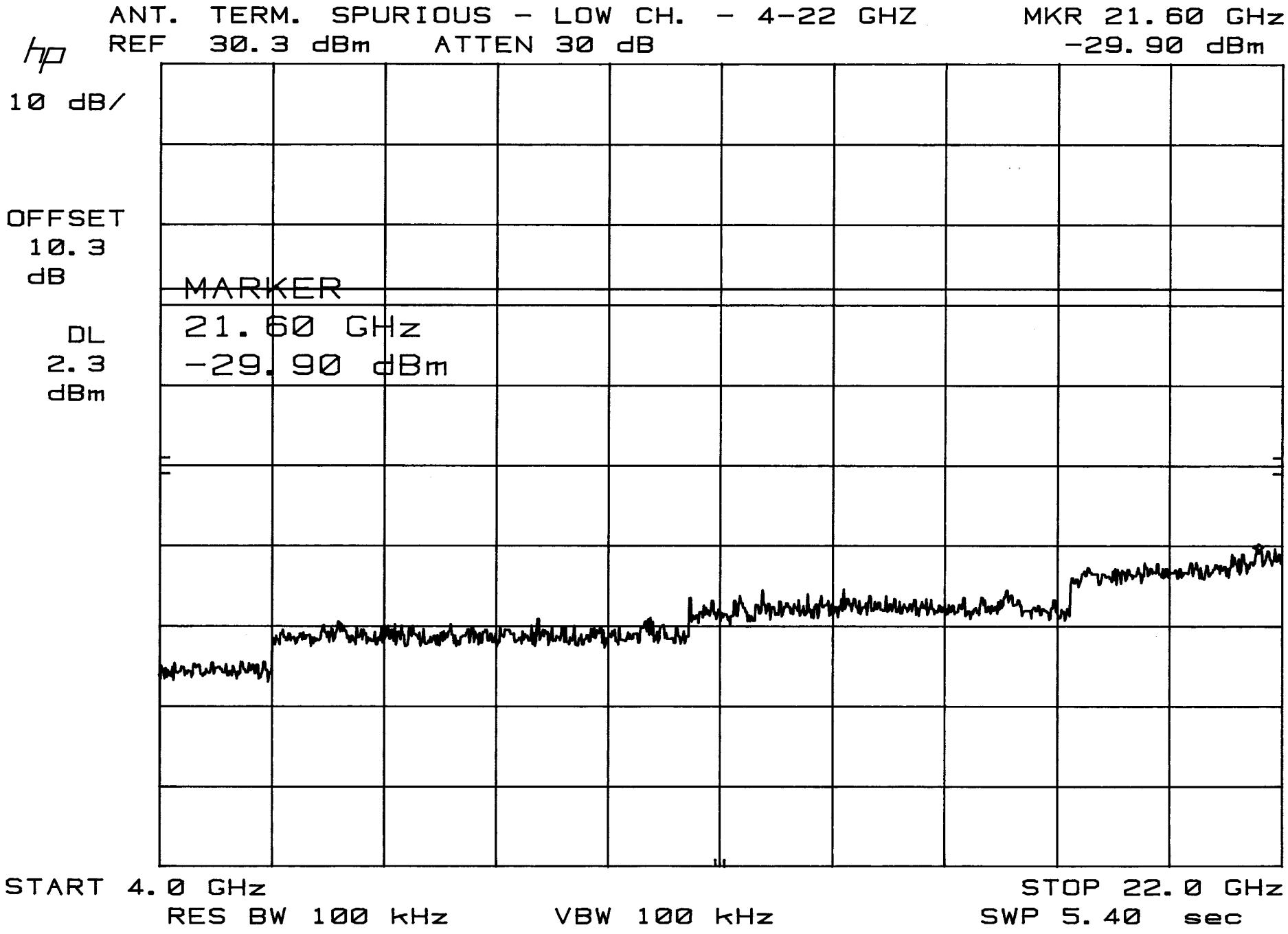
NO EMISSIONS NOR HARMONICS FOUND AFTER THE 4TH HARMONIC

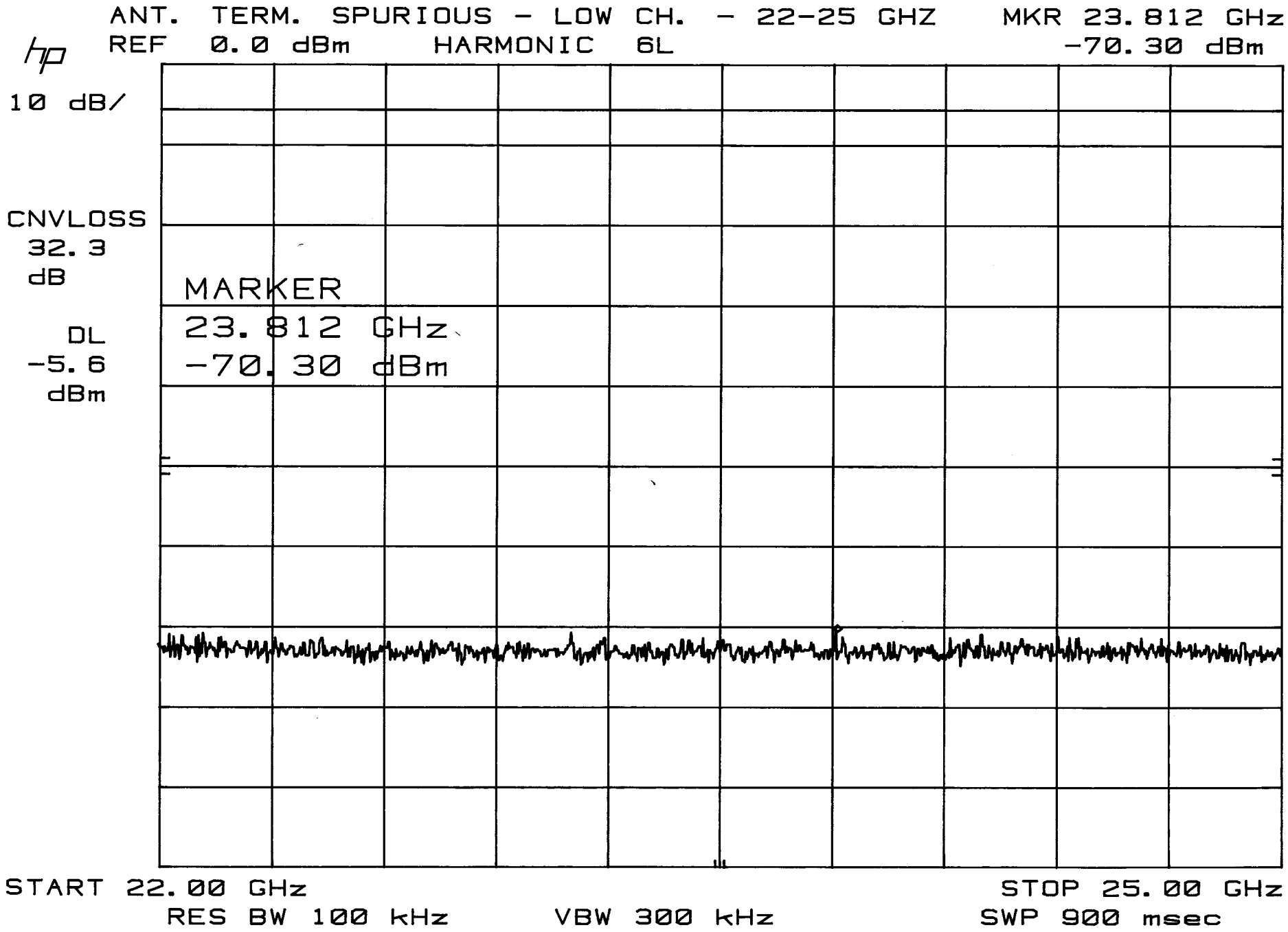
SPURIOUS EMISSIONS AT THE ANTENNA TERMINAL

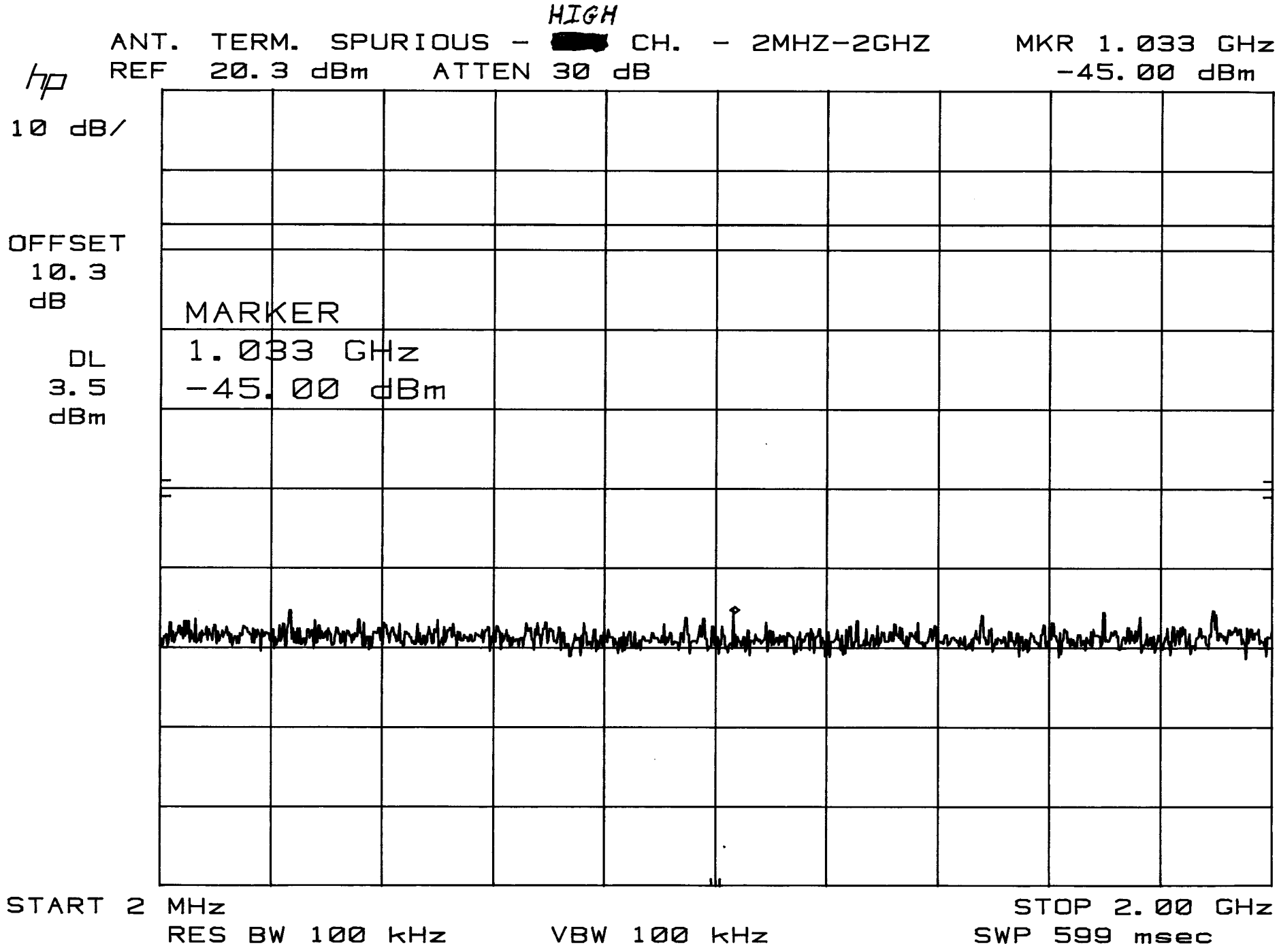
DATA SHEETS

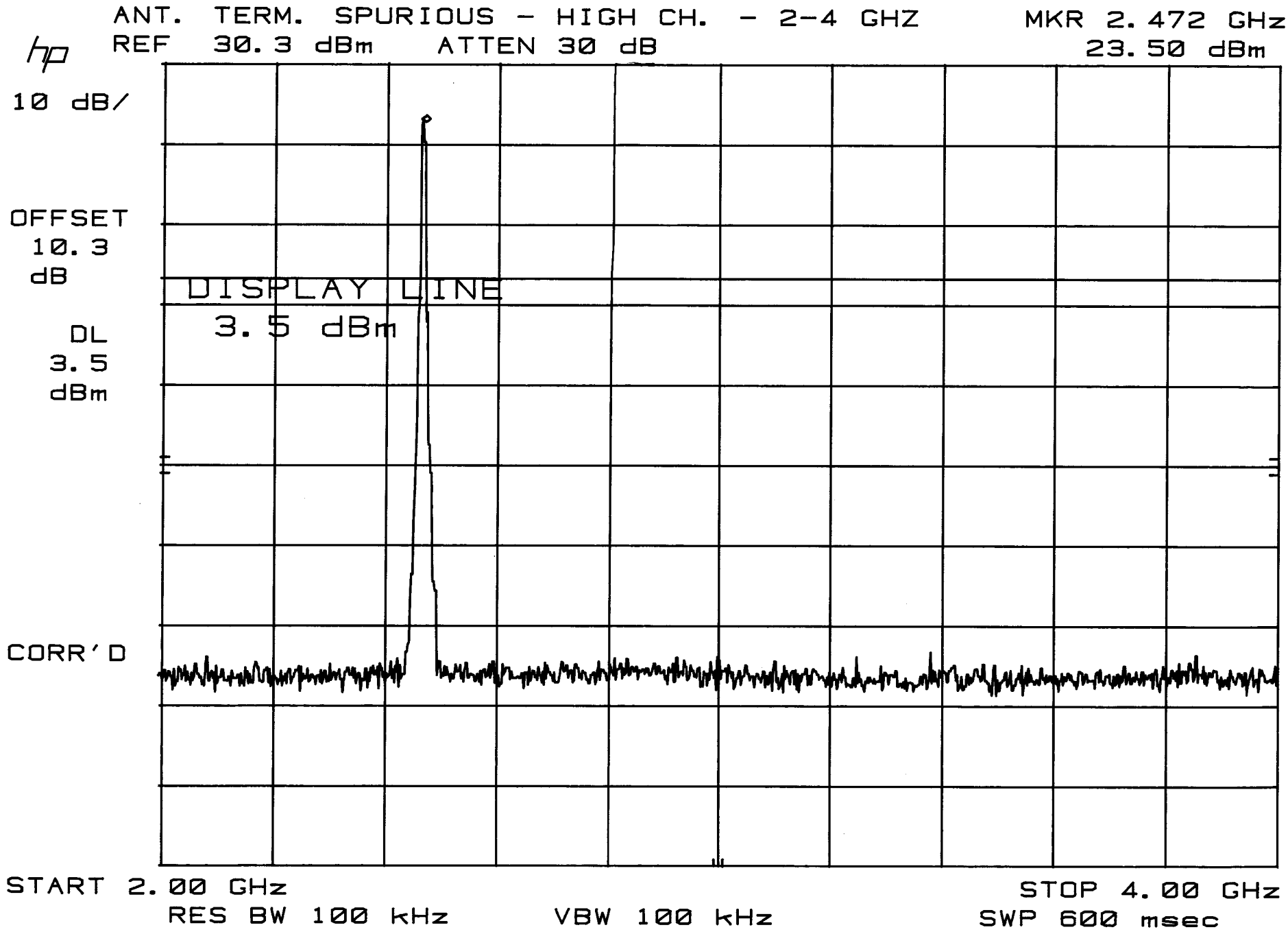

ANT. TERM. SPURIOUS - LOW CH. - 2MHZ-2GHZ
MKR 1.878 GHz
REF 30.3 dBm
ATTEN 30 dB
-43.00 dBm
10 dB/
OFFSET
10.3
dB
DISPLAY LINE
2.3 dBm
DL
2.3
dBm
CORR'D
START 2 MHz
STOP 2.00 GHz
RES BW 100 kHz
VBW 300 kHz
SWP 599 msec

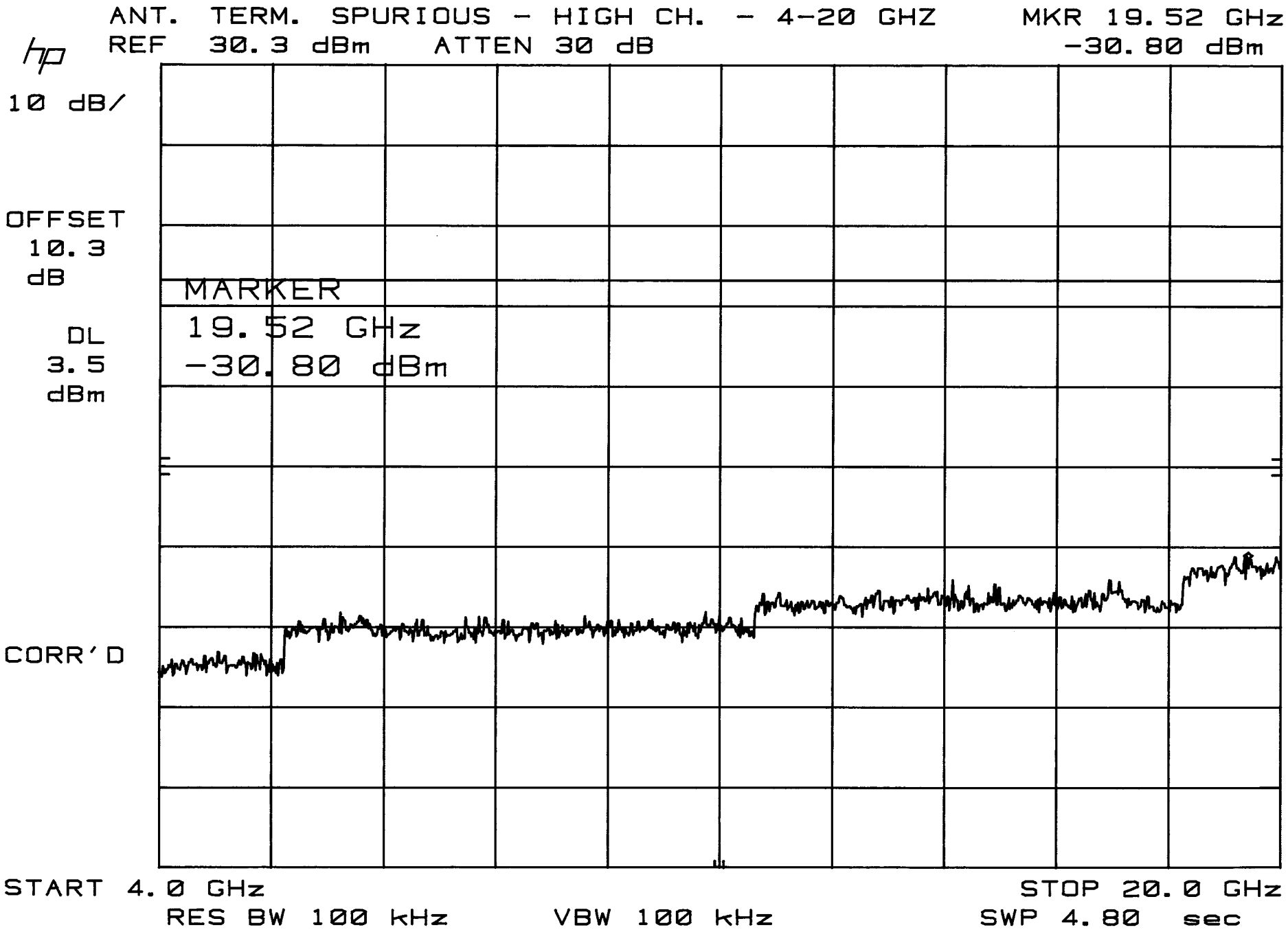

ANT. TERM. SPURIOUS - LOW CH. - 2-4 GHZ
MKR 2.462 GHz
22.30 dBm
REF 30.3 dBm
ATTEN 30 dB
10 dB/
OFFSET
10.3
dB
DISPLAY LINE
2.3 dBm
DL
2.3
dBm
START 2.00 GHz
STOP 4.00 GHz
RES BW 100 kHz
VBW 100 kHz
SWP 600 msec

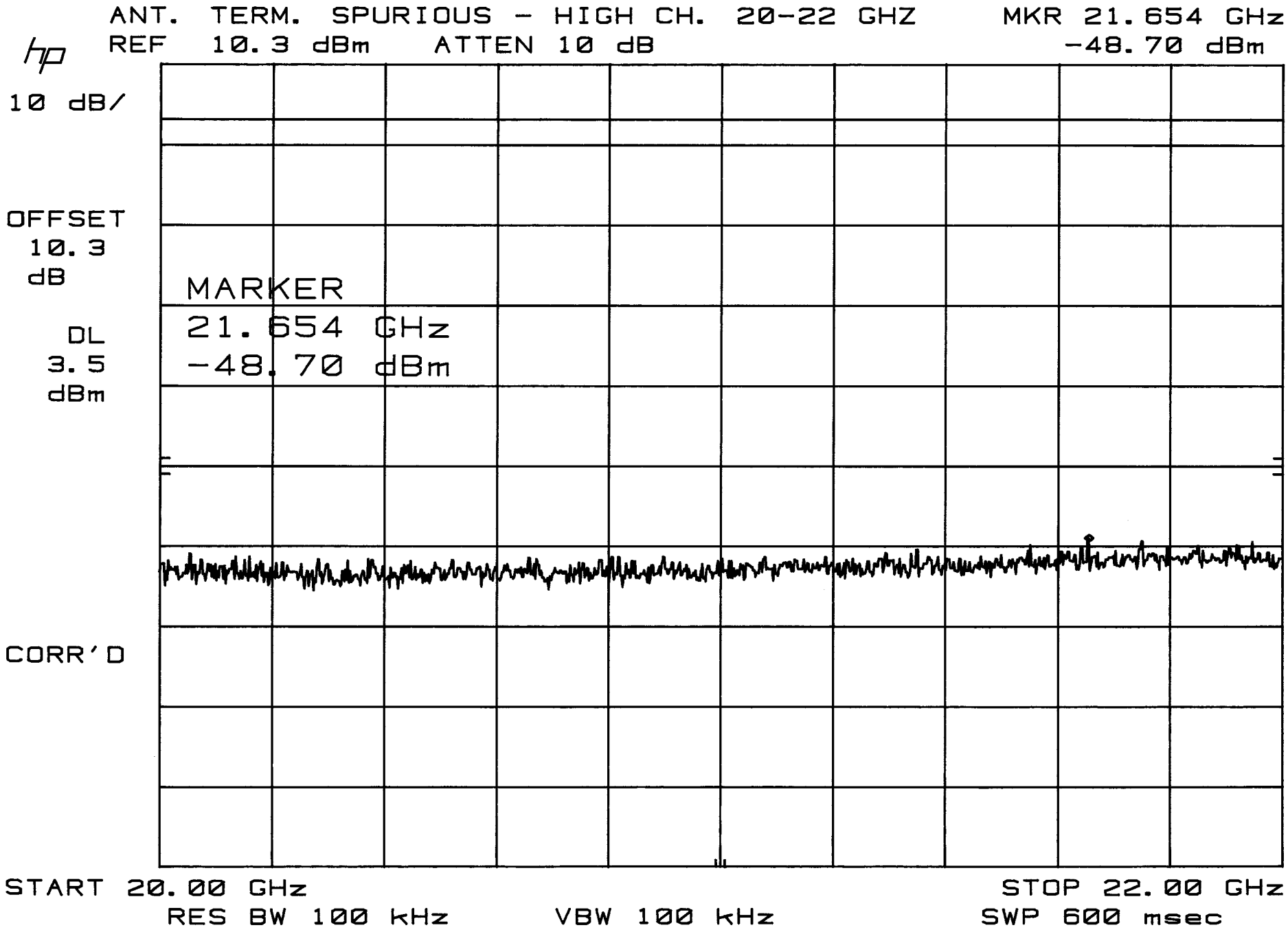

ANT. TERM. SPURIOUS - LOW CH. - 4-22 GHZ
MKR 21.60 GHz
REF 30.3 dBm
ATTEN 30 dB
-29.90 dBm
10 dB/
OFFSET
10.3
dB
MARKER
21.60 GHz
-29.90 dBm
DL
2.3
dBm
START 4.0 GHz
STOP 22.0 GHz
RES BW 100 kHz
VBW 100 kHz
SWP 5.40 sec

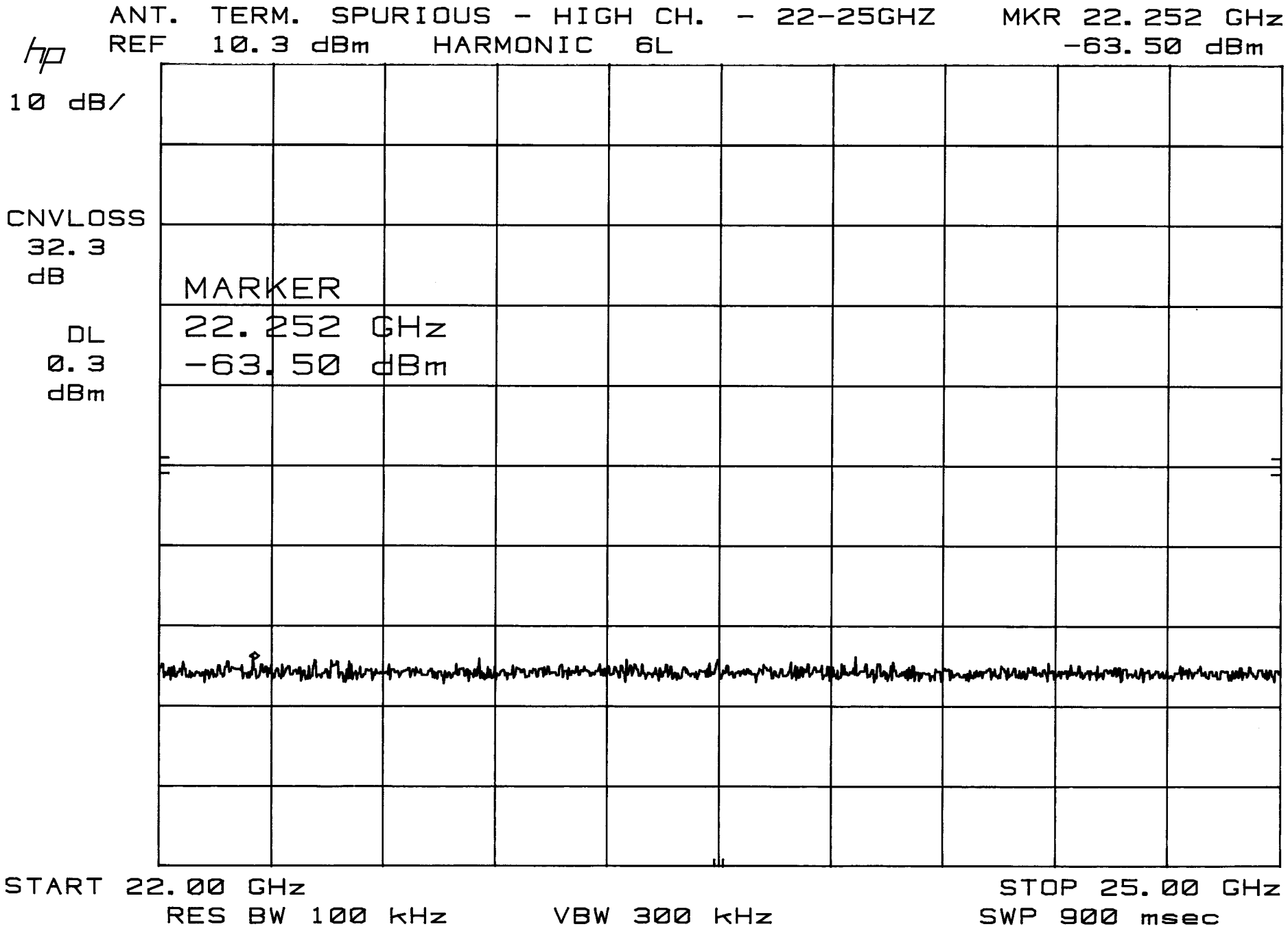

ANT. TERM. SPURIOUS - LOW CH. - 22-25 GHZ
MKR 23.812 GHz
REF 0.0 dBm
HARMONIC 6L
-70.30 dBm
10 dB/
CNVLOSS
32.3
dB
DL
-5.6
dBm
MARKER
23.812 GHz
-70.30 dBm
START 22.00 GHz
STOP 25.00 GHz
RES BW 100 kHz
VBW 300 kHz
SWP 900 msec


HIGH
ANT. TERM. SPURIOUS - [redacted] CH. - 2MHZ-2GHZ
MKR 1.033 GHz
REF 20.3 dBm
ATTEN 30 dB
-45.00 dBm
10 dB/
OFFSET
10.3
dB
MARKER
1.033 GHz
-45.00 dBm
DL
3.5
dBm
START 2 MHz
STOP 2.00 GHz
RES BW 100 kHz
VBW 100 kHz
SWP 599 msec


ANT. TERM. SPURIOUS - HIGH CH. - 2-4 GHZ
MKR 2.472 GHz
REF 30.3 dBm
ATTEN 30 dB
23.50 dBm
10 dB/
OFFSET
10.3
dB
DISPLAY LINE
3.5 dBm
DL
3.5
dBm
CORR'D
START 2.00 GHz
STOP 4.00 GHz
RES BW 100 kHz
VBW 100 kHz
SWP 600 msec


ANT. TERM. SPURIOUS - HIGH CH. - 4-20 GHZ
MKR 19.52 GHz
REF 30.3 dBm
ATTEN 30 dB
-30.80 dBm
10 dB/
OFFSET
10.3
dB
MARKER
19.52 GHz
-30.80 dBm
DL
3.5
dBm
CORR'D
START 4.0 GHz
STOP 20.0 GHz
RES BW 100 kHz
VBW 100 kHz
SWP 4.80 sec


ANT. TERM. SPURIOUS - HIGH CH. 20-22 GHZ
MKR 21.654 GHz
REF 10.3 dBm
ATTEN 10 dB
-48.70 dBm
10 dB/
OFFSET
10.3
dB
MARKER
21.654 GHz
-48.70 dBm
DL
3.5
dBm
CORR'D
START 20.00 GHz
STOP 22.00 GHz
RES BW 100 kHz
VBW 100 kHz
SWP 600 msec


ANT. TERM. SPURIOUS - HIGH CH. - 22-25GHZ
MKR 22.252 GHz
REF 10.3 dBm
HARMONIC 6L
-63.50 dBm
10 dB/
CNVLOSS
32.3
dB
MARKER
22.252 GHz
-63.50 dBm
DL
0.3
dBm
START 22.00 GHz
STOP 25.00 GHz
RES BW 100 kHz
VBW 300 kHz
SWP 900 msec

FREQUENCY STABILITY

DATA SHEETS

ENVIRONMENT ASSOCIATES

TEST DATA

DATE STARTED: 8-9-02	CUSTOMER: SEARCH SYSTEMS/COMPATIBLE ELECTRONICS	TECHNICIAN (SIGNATURE):
DATA COMPLETED: 8-9-02	SPECIMEN DESCRIPTION: 2.4 GHz VIDEO TRANSMITTER	ENGINEER (SIGNATURE):
TEMPERATURE (LABORATORY): 23°C	TYPE OF TEST: TEMPERATURE - FREQUENCY STABILITY	ENGINEER: GEORGE KUJAWA
HUMIDITY (LABORATORY): 45% R.H.	TEST SPECIFICATION: 47 CFR Ch 1 (10-1-99 EDITION) PARAGRAPH NUMBER: 2.1055 & 90.213	JOB NUMBER: OC14777-0810357
SPECIMEN NUMBER: S/N N/A	M/N N/A	

	THE UNIT UNDER TEST SHALL BE EXPOSED TO TEMPERATURES FROM -30°C TO +50°C AT INTERVALS OF 10°C. DWELL TIME AT EACH TEMPERATURE SHALL BE 20 MINUTES MINIMUM. RAMP RATE SHALL BE 2°C/MINUTE. FREQUENCY STABILITY AT EACH TEMPERATURE SHALL BE MEASURED (BY CUSTOMER).
08:30	SAMPLE UNDER TEST WAS PLACED INSIDE "TENNEY J.R." CHAMBER. CHAMBER WAS PROGRAMMED FOR PROFILE AS DESCRIBED ABOVE.
09:20	CUSTOMER CONNECTED MONITORING EQUIPMENT. TAKEN PHOTO OF THE TEST SET-UP.
09:25	RAMP CHAMBER TO -30°C.
09:35	CHAMBER AT -30°C. START PROGRAM MODE.
10:30	CHAMBER CIRCUIT BREAKER OVERLOADED. RESET BREAKER. CONTINUE TEST.
13:50	COMPLETE 50°C SOAK. RETURN TO ROOM TEMPERATURE.
14:05	CHAMBER AT ROOM TEMPERATURE. CUSTOMER REPORTED ALL FUNCTIONAL TEST PASSED.
	TEST COMPLETE.

Frequency Stability over Temperature FCC 2.1055 and 90.213

Search Systems, Inc. Date: 08/09/02

2.4 GHz Video Transmitter Lab: Enivronment Assoc.

Model: SSIVTX01 Tested By: Kyle Fujimoto

Test Description: Low Channel - Center Frequency - 2.462537 GHz

Temp Celsisus	Voltage	FREQUENCY (GHz)	Deviation	% ERROR
-30	7 DC	2.4625302	0.0000068	0.0002761
-20	7 DC	2.4625302	0.0000068	0.0002761
-10	7 DC	2.4625312	0.0000058	0.0002355
0	7 DC	2.4625351	0.0000019	0.0000772
10	7 DC	2.4625372	0.0000002	0.0000081
20	5.95 DC (-15%)	2.4625392	0.0000022	0.0000893
20	7 DC	2.4625397	0.0000027	0.0001096
20	8.05 DC (+15%)	2.4625402	0.0000032	0.0001299
30	7 DC	2.4625372	0.0000002	0.0000081
40	7 DC	2.4625377	0.0000007	0.0000284
50	7 DC	2.4625432	0.0000062	0.0002518

Frequency Stability over Temperature FCC 2.1055 and 90.213

Search Systems, Inc. Date: 08/09/02

2.4 GHz Video Transmitter Lab: Enivronment Assoc.

Model: SSIVTX01 Tested By: Kyle Fujimoto

Test Description: High Channel - Center Frequency - 2.4725432 GHz

Temp Celsisus	Voltage	FREQUENCY (GHz)	Deviation	% ERROR
-30	7 DC	2.4725312	0.0000120	0.0004853
-20	7 DC	2.4725276	0.0000156	0.0006309
-10	7 DC	2.4725397	0.0000035	0.0001416
0	7 DC	2.4725367	0.0000065	0.0002629
10	7 DC	2.4725391	0.0000041	0.0001658
20	5.95 DC (-15%)	2.4725391	0.0000041	0.0001658
20	7 DC	2.4725391	0.0000041	0.0001658
20	8.05 DC (+15%)	2.4725381	0.0000051	0.0002063
30	7 DC	2.4725367	0.0000065	0.0002629
40	7 DC	2.4725397	0.0000035	0.0001416
50	7 DC	2.4725487	0.0000055	0.0002224

JOB NUMBER OC14777-0810357

ENVIRONMENT ASSOCIATES

EQUIPMENT LIST

TEST DESCRIPTION	EQUIPMENT DESCRIPTION	MANUFACTURER	MODEL NUMBER	I. D. NUMBER	CALIBRATION LAST	CALIBRATION DUE
TEMPERATURE	CHAMBER	TENNEY	J.R.	1090	NOT REQUIRED	
	CHART RECORDER	HONEYWELL	DR4502	0999	2-15-02	8-15-02

ENVIRONMENT
ASSOCIATES

TEST DATA

DATE STARTED 8-9-02	CUSTOMER SEARCH SYSTEMS/COMPATIBLE ELECTRONICS	TECHNICIAN (SIGNATURE)
DATA COMPLETED 8-9-02	SPECIMEN DESCRIPTION 2.4 GHz VIDEO TRANSMITTER	ENGINEER (SIGNATURE)
TEMPERATURE (LABORATORY) 23°C	TYPE OF TEST TEMPERATURE - FREQUENCY STABILITY	ENGINEER GEORGE KUJAWA
HUMIDITY (LABORATORY) 45% R.H.	TEST SPECIFICATION 47 CFR Ch 1 (10-1-99 EDITION) PARAGRAPH NUMBER 2.1055 & 90.213	JOB NUMBER OC14777-0810357
SPECIMEN NUMBER S/N N/A	H/N N/A