# EXHIBIT 5

TECHNICAL TEST REPORT

*FCC SUBPART C*
*TEST REPORT*

*for*

# 900 MHZ DIGITAL SPREAD SPECTRUM CORDLESS PHONE

## Model: SKYHAWK98

Prepared for:

S. MEGGA TELECOMMUNICATIONS LIMITED
1 KWAI HEI STREET, KWAI CHUNG, N.T.,
HONG KONG, PEOPLE'S REPUBLIC OF CHINA

Prepared by: _____
KYLE FUJIMOTO

Approved by: _____
SCOTT McCUTCHAN

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(714) 579-0500

DATE: JUNE 10, 1998

| | REPORT BODY | APPENDICES | | | TOTAL |
|---|---|---|---|---|---|
| | | *A* | *B* | *C* | |
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## GENERAL REPORT SUMMARY

This electromagnetic emission and immunity 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 in any form unless done so in full.

The immunity data included in this report are not covered by NVLAP accreditation. This report must not be used to claim product endorsement by NVLAP or any other agency of the U.S. Government.

| | |
|---|---|
| Device Tested: | 900 MHz Digital Spread Spectrum Cordless Phone<br>Model: SKYHAWK98<br>S/N: N/A |
| Modifications: | The EUT was modified in order to meet the specifications. Please see list located in Appendix C. |
| Manufacturer: | S. Megga Telecommunications Limited<br>1 Kwai Hei Street, Kwai Chung, N.T.,<br>Hong Kong, People's Republic of China |
| Test Dates: | May 22, 28, and 29, 1998 |
| 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 | Complies with the relevant requirements of FCC Title 47, Part 15, Subpart C, section 15.207(a) |
| 2 | Spurious Radiated RF Emissions, 10 kHz – 1000 MHz | Complies with the relevant requirements of FCC Title 47, Part 15, Subpart C, section 15.209(a) |
| 3 | Fundamental and Emissions produced by the intentional radiator in non-restricted bands, 10 kHz – 10000 MHz | Complies with the relevant requirements of FCC Title 47, Part 15, Subpart C, section 15.209(c) |
| 4 | Emissions produced by the intentional radiator in restricted bands, 10 kHz – 10000 MHz | Complies with the relevant requirements of FCC Title 47, Part 15, Subpart C, section 15.209(a) |
| 5 | 6 dB Bandwidth | Complies with the relevant requirements of FCC Title 47, Part 15, Subpart C, section 15.247 (a)(2) |
| 6 | Maximum Peak Output Power | Complies with the relevant requirements of FCC Title 47, Part 15, Subpart C, section 15.247 (b)(1) |
| 7 | RF Antenna Conducted | Complies with the relevant requirements of FCC Title 47, Part 15, Subpart C, section 15.247 (c) |
| 8 | Peak Power Spectral Density Conducted from the Intentional Radiator to the Antenna | Complies with the relevant requirements of FCC Title 47, Part 15, Subpart C, section 15.247 (d) |
| 9 | Processing Gain | Complies with the relevant requirements of FCC Title 47, Part 15, Subpart C, section 15.247 (e) |

## 1. PURPOSE

This document is a qualification test report based on the Electromagnetic Interference (EMI) tests performed on the 900 MHz Digital Spread Spectrum Cordless Phone Model: SKYHAWK98. 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 900 MHz Digital Spread Spectrum Cordless Phone, referred to as EUT hereafter, are within the specification limits defined by FCC Title 47, Part 15, Subpart C, section 15.247.

# 2. ADMINISTRATIVE DATA

## 2.1 Location of Testing

The EMI/EMC tests described herein were performed at the test facility of Compatible Electronics, 114 Olinda Drive, Brea, California.

## 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

S. Megga Telecommunications Limited

Mr. C.W. Cheung Senior Manager (R & D)

Compatible Electronics, Inc.

| | |
|---|---|
| Brian Voegele | Test Engineer |
| Arnold Gaffud | Test Engineer |
| Kyle Fujimoto | Test Engineer |
| Scott McCutchan | Lab Manager |

## 2.4 Date Test Sample was Received

The test sample was received on May 22, 1998.

## 2.5 Disposition of the Test Sample

The test sample has not yet been returned to S. Megga Telecommunications Limited.

## 2.6 Abbreviations and Acronyms

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

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

## 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 1997 | 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. |

# 4. DESCRIPTION OF TEST CONFIGURATION

## 4.1 Description of Test Configuration - EMI

The components of the EUT were tested separately.

Specifics of the EUT and Peripherals Tested

**Handset being tested:** The 900 MHz Digital Spread Spectrum Cordless Phone -- Handset Model: SKYHAWK98 (EUT) was placed on the wooden table and tested in three orthogonal axis. The low (channel 1), medium (channel 10), and high (channel 20) channels were tested. The handset was transmitting to and receiving from the 900 MHz Digital Spread Spectrum Cordless Phone -- Base. The EUT was investigated for emissions while off hook. The radiated data was taken in this mode of operation. All initial investigations were performed with the EMI receiver in manual mode scanning the frequency range continuously. The cables were bundled and routed as shown in the photographs in Appendix A.

**Base being tested:** The 900 MHz Digital Spread Spectrum Cordless Phone -- Base Model: SKYHAWK98 (EUT) was placed on the wooden table. The low (channel 1), medium (channel 10), and high (channel 20) channels were tested. The base was connected to a line simulator and AC adapter via its RJ-11 and power ports, respectively. The line simulator was connected to the Comdial telephone. The base was transmitting and receiving from the 900 MHz Digital Spread Spectrum Cordless Phone -- Handset. The 900 MHz Digital Spread Spectrum Cordless Phone -- Handset was also used to dial out a number on the simulator that caused the Comdial telephone to ring. The conducted as well as radiated data was taken in this mode of operation. All initial investigations were performed with the EMI receiver in manual mode scanning the frequency range continuously. The cables were bundled and routed as shown in the photographs in Appendix A.

### 4.1.1 Cable Construction and Termination

**HANDSET BEING TESTED**

There are no cables when the handset is being tested

**BASE BEING TESTED**

Cable 1

This is a 6 foot unshielded cable connecting the base to the line simulator. It has an RJ-11 connector at the line simulator end and is hard wired into the base. The cable was bundled to a length of 1 meter.

Cable 2

This is a 6 foot unshielded cable connecting the telephone to the line simulator. It has an RJ-11 connector at the line simulator end and is hard wired into the telephone. The cable was bundled to a length of 1 meter.

Cable 3

This is a 6 foot unshielded round cable connecting the base to the AC adapter. It has a 1/8" power jack at the base end and is hard wired into the AC adapter.

# 5. LISTS OF EUT, ACCESSORIES AND TEST EQUIPMENT

## 5.1 EUT and Accessory List

| EQUIPMENT | MANUFACTURER | MODEL NUMBER | SERIAL NUMBER | FCC ID |
|---|---|---|---|---|
| 900 MHZ DIGITAL SPREAD SPECTRUM CORDLESS PHONE | S. MEGGA TELECOMMUNICATIONS LIMITED | SKYHAWK98 | 12345 | CLHSKYHAWK98 |
| CLASS 2 TRANSFORMER | S. MEGGA TELECOMMUNICATIONS LIMITED | SKYHAWK98 | N/A | N/A |
| LINE SIMULATOR | TELTONE | TLS-3 | N/A | N/A |
| PHONE | COMDIAL | N/A | N/A | REG (#) A5493N-70140-TE-T |
| 900 MHZ DIGITAL SPREAD SPECTRUM CORDLESS PHONE | S. MEGGA TELECOMMUNICATIONS LIMITED | SKYHAWK98 | N/A | CLHSKYHAWK98 |

## 5.2 Test Equipment

| EQUIPMENT TYPE | MANU-FACTURER | MODEL NUMBER | SERIAL NUMBER | CAL. DATE | CAL. CYCLE |
|---|---|---|---|---|---|
| Spectrum Analyzer | Hewlett Packard | 8566B | 2729A04566 | July 2, 1997 | 1 Year |
| Preamplifier | Com Power | PA-102 | 1017 | February 16, 1998 | 1 Year |
| Quasi-Peak Adapter | Hewlett Packard | 85650A | 2521A00924 | June 16, 1997 | 1 Year |
| RF Attenuator | Com-Power | A-410 | 1602 | November 25, 1997 | 1 Year |
| LISN | Com Power | LI-200 | 1764 | January 3, 1998 | 1 Year |
| LISN | Com Power | LI-200 | 1771 | January 3, 1998 | 1 Year |
| LISN | Com Power | LI-200 | 1775 | January 3, 1998 | 1 Year |
| LISN | Com Power | LI-200 | 1780 | January 3, 1998 | 1 Year |
| Biconical Antenna | Com Power | AB-100 | 1548 | March 24, 1998 | 1 Year |
| Log Periodic Antenna | Com Power | AL-100 | 1012 | February 13, 1998 | 1 Year |
| 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 | HP98561A | 2522A05178 | N/A | N/A |
| Printer | Hewlett Packard | 2225A | 2723500869 | N/A | N/A |
| Plotter | Hewlett Packard | 7440A | 8726K38417 | N/A | N/A |
| Signal Generator | Giga-Tronics | 6062A | 9620906 | June 16, 1997 | 1 Year |
| Microwave Amplifier | Com-Power | PA-122 | 001 | March 31, 1998 | N/A |
| Computer | Sony | PCV-240 | 5104422 | N/A | N/A |
| Horn Antenna | Antenna Research | DRG-118/A | 1053 | December 8, 1995 | N/A |

# 6. TEST SITE DESCRIPTION

## 6.1 Test Facility Description

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

## 6.2 EUT Mounting, Bonding and Grounding

For all tests, the EUT was mounted on a 1.0 by 1.5 by 0.8 meter high non-conductive table, which was placed on the ground plane.

The EUT was not grounded.

## 7. TRANSMITTER

The transmitter takes baseband data, high pass filters it to remove any DC contributed by bias networks, then lowpass filters it to provide spectral shaping. After filtering, the resultant signal is modulated to the synthesized RF carrier. The modulated signal is then amplified to one of the three transmit power levels. The harmonics of the amplified signal are removed with a 1.2 GHz lowpass filter. Finally, the signal is routed through the T/R switch for transmission by the antenna.

## 8. TRANSMITTER POWER

Transmit power is herein defined as the power delivered to a 50 Ohm load at the antenna port of the T/R switch.

| Power Level | Power | Accuracy |
|---|---|---|
| high | 19 dBm | +1/ -1.5 dB |
| medium | 7 dBm | +3/ -3 dB |
| low | -1 dBm | +3/ -3 dB |

## 9. CHANNEL NUMBER AND FREQUENCIES

The RF channels occupy the frequency band 903.6-926.4 MHz and are numbered 1 to 20.

| Channel Number | Channel center Frequency (MHz) |
|---|---|
| 1 | 903.6 |
| 2 | 904.8 |
| 3 | 906.0 |
| 4 | 907.2 |
| 5 | 908.4 |
| 6 | 909.6 |
| 7 | 910.8 |
| 8 | 912.0 |
| 9 | 913.2 |
| 10 | 914.4 |
| 11 | 915.6 |
| 12 | 916.8 |
| 13 | 918.0 |
| 14 | 919.2 |
| 15 | 920.4 |
| 16 | 921.6 |
| 17 | 922.8 |
| 18 | 924.0 |
| 19 | 925.2 |
| 20 | 926.4 |

## 10. CHIPPING RATE

A 12-chip spreading code is used. The spreading code cyclic duration is 12 times that of the encoded data. The code starts and stops on encoded bit boundaries.

## 11. SPREADING GAIN

The spreading gain is 11 dB.

## 12. ANTENNA GAIN

The antenna gain is 1.5 dBi for both the base and handset.

## 13. PROCESSING GAIN

The Processing Gain was measured using the CW jamming margin method. Figure 1a shows the test configuration. The test consists of stepping a signal generator in 50 kHz increments across the passband of the system (up to 750 kHz away from the center frequency). The passband of the system is 1.5 MHz (±750 kHz). At each point, the generator level required to produce the recommended Bit Error Rate (BER) (Set at BER=10 to the negative third power) is recorded. This level is the jamming level. The output power of the transmitter unit is measured at the same point. The Jammer to Signal (J/S) ratio is then calculated. Discard the worst 20% of the J/S data point. The lowest remaining J/S ratio is used to calculate the processing gain. The maximum implementation loss a system can claim in calculating processing gain is 2 dB. The equation to calculate the processing gain (Gp) is the following:

$Gp=(S/N)o + Mj + Lsys$

Where Lsys = system implementation loss = 2dB
Mj = jamming margin (J/S) in dB,
(S/N)o = signal to noise ratio required for a DBPSK system with BER of 10 to the negative third power.

The theoretical GP is 11 dB

# 14. TEST PROCEDURES

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

## 14.1 Emissions Tests

### 14.1.1 Conducted Emissions Test

The spectrum analyzer was used as a measuring meter along with the quasi-peak adapter. The data was collected with the spectrum analyzer in the peak detect mode with the "Max Hold" feature activated. The quasi-peak detector 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 spectrum analyzer offset was adjusted accordingly to read the actual data measured. The LISN output was read by the spectrum analyzer. The output of the second LISN was terminated by a 50 ohm termination. The effective measurement bandwidth used for the conducted emissions 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: 1992. The excess power cord was wrapped in a figure eight pattern to form a bundle not exceeding 0.4 meters in length.

The initial test data was taken in manual mode while scanning the frequency ranges of 150 kHz to 30 MHz. The conducted emissions from the EUT were maximized for operating mode as well as cable placement. Once a predominant frequency (within 12 dB of the limit) was found, it was more closely examined with the spectrum analyzer span adjusted to 1 MHz.

The final data was collected under program control by the HP 93153B computer in several overlapping sweeps by running the spectrum analyzer at a minimum scan rate of 10 seconds per octave.

**SECTION 14.1.1.1**

# *CONDUCTED EMISSIONS DATA SHEETS FOR THE BASE*

**FCC ID: CLHSKYHAWK98**

MEASUREMENT NOTES:

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S. MEGGA
900 MHZ DSSS TELEPHONE
MODEL: SKYHAWK 98
FCC - BLACK LEAD - MAY 22, 1998 - 16:12:30

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25 highest Peaks above -50 dB of Limit Line #2
peak criteria = .1 dB

| PEAK# | FREQ (MHz) | (dBuV) | DELTA |
|---|---|---|---|
| 1 | .4998 | 40.8 | -7.2 |
| 2 | 11.57 | 40.8 | -7.2 |
| 3 | .4538 | 40.7 | -7.3 |
| 4 | .4935 | 40.2 | -7.8 |
| 5 | .4654 | 40.1 | -7.9 |
| 6 | .4752 | 40 | -8.0 |
| 7 | .5147 | 40 | -8.0 |
| 8 | .5367 | 39.9 | -8.1 |
| 9 | .4693 | 39.8 | -8.2 |
| 10 | .5212 | 39.5 | -8.5 |
| 11 | .5278 | 39.2 | -8.8 |
| 12 | .5322 | 38.4 | -9.6 |
| 13 | .5986 | 38.4 | -9.6 |
| 14 | .6374 | 38.3 | -9.7 |
| 15 | .8373 | 38.3 | -9.7 |
| 16 | .5812 | 38.1 | -9.9 |
| 17 | .5458 | 38 | -10.0 |
| 18 | .5716 | 38 | -10.0 |
| 19 | .6455 | 37.9 | -10.1 |
| 20 | .5886 | 37.8 | -10.2 |
| 21 | .5574 | 37.7 | -10.3 |
| 22 | .651 | 37.6 | -10.4 |
| 23 | .6932 | 37.6 | -10.4 |
| 24 | .6268 | 37.3 | -10.7 |
| 25 | .6817 | 37.3 | -10.7 |

MEASUREMENT NOTES:

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TEST ENGINEER: Scott McCutcheon for Arnold Gaffud
~~ARNOLD GAFFUD~~

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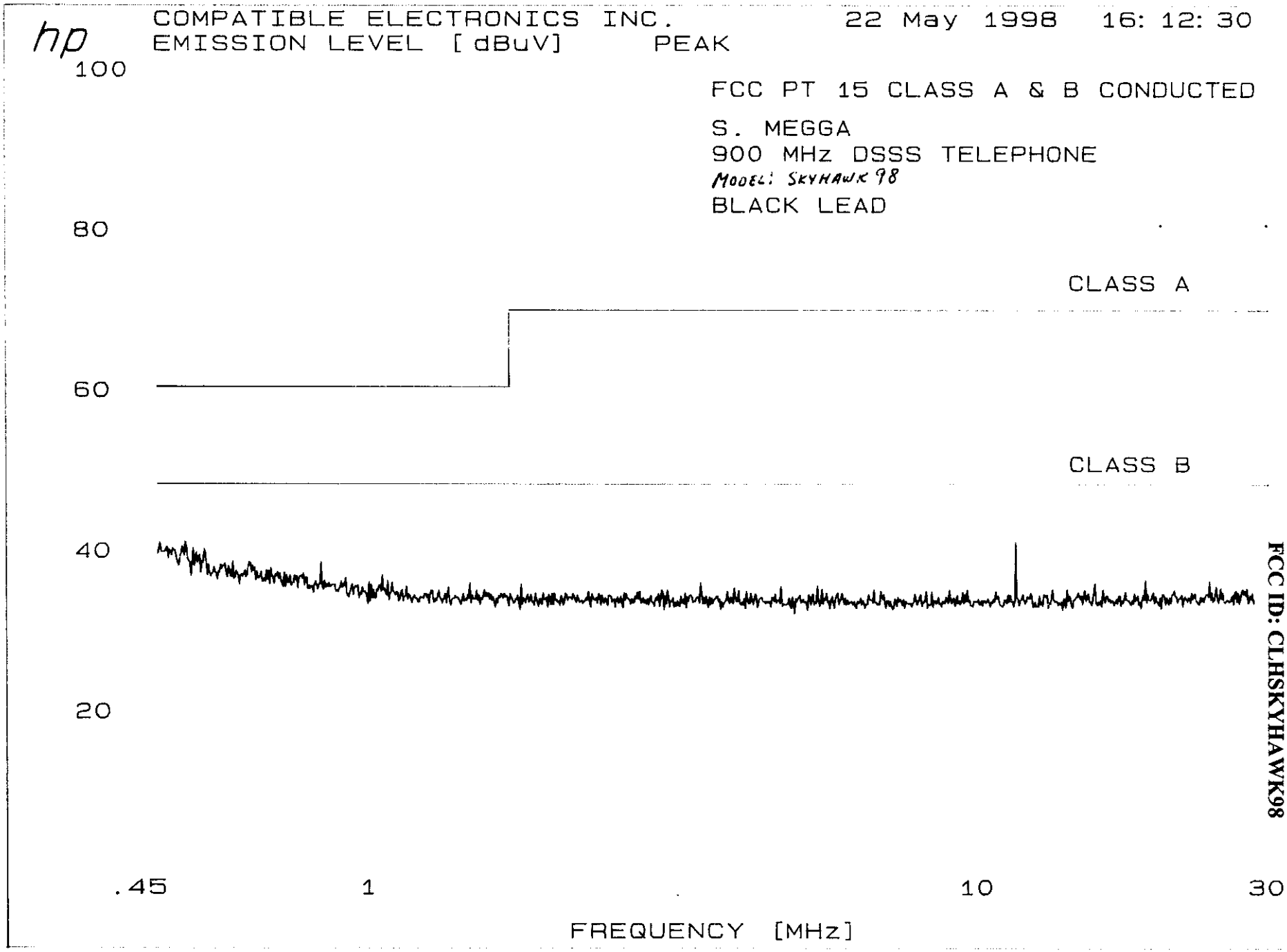



FCC ID: CLHSKYHAWK98

**FCC ID: CLHSKYHAWK98**

MEASUREMENT NOTES:

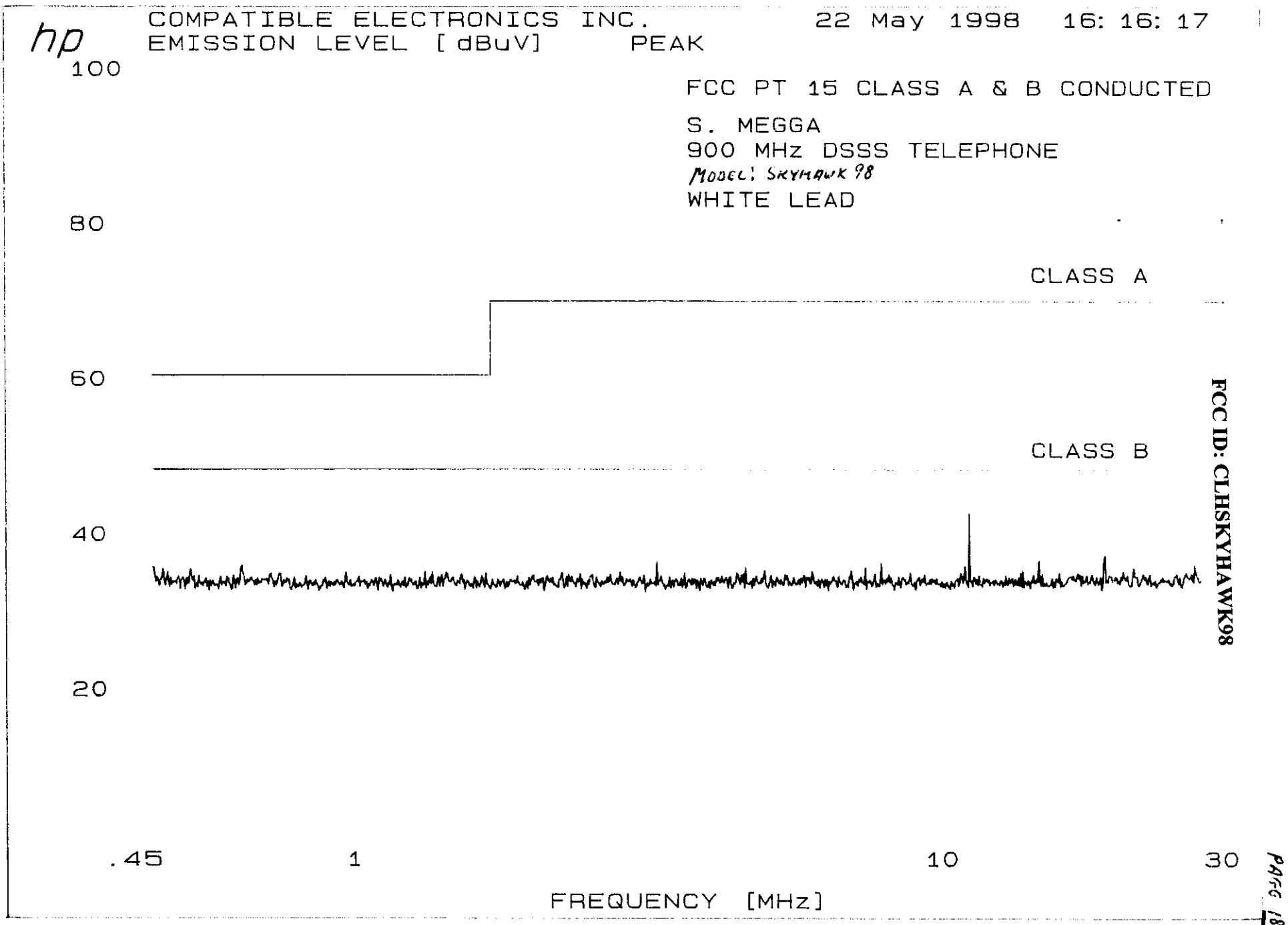
S. MEGGA
900 MHZ DSSS TELEPHONE
MODEL: SKYHAWK 98
FCC - WHITE LEAD - MAY 22, 1998 - 16:16:17

25 highest Peaks above -50 dB of Limit Line #2
peak criteria = .1 dB

| PEAK# | FREQ (MHz) | (dBuV) | DELTA |
|---|---|---|---|
| 1 | 11.1 | 42.3 | -5.7 |
| 2 | 18.83 | 37 | -11.0 |
| 3 | 14.58 | 36.4 | -11.6 |
| 4 | 3.26 | 36.1 | -11.9 |
| 5 | 7.868 | 36 | -12.0 |
| 6 | 26.79 | 35.8 | -12.2 |
| 7 | .6401 | 35.6 | -12.4 |
| 8 | 10.91 | 35.6 | -12.4 |
| 9 | 4.618 | 35.4 | -12.6 |
| 10 | 7.388 | 35.4 | -12.6 |
| 11 | 21.09 | 35.4 | -12.6 |
| 12 | .4654 | 35.2 | -12.8 |
| 13 | .5212 | 35.2 | -12.8 |
| 14 | 29.13 | 35.1 | -12.9 |
| 15 | 4.98 | 35 | -13.0 |
| 16 | 6.996 | 35 | -13.0 |
| 17 | 13.69 | 35 | -13.0 |
| 18 | .4732 | 34.9 | -13.1 |
| 19 | 1.317 | 34.9 | -13.1 |
| 20 | 5.99 | 34.9 | -13.1 |
| 21 | 20.22 | 34.9 | -13.1 |
| 22 | 28.65 | 34.9 | -13.1 |
| 23 | .9657 | 34.8 | -13.2 |
| 24 | 1.357 | 34.8 | -13.2 |
| 25 | 1.433 | 34.8 | -13.2 |

MEASUREMENT NOTES:

TEST ENGINEER: Scott McCall for Arnold Gaffud
~~ARNOLD GAFFUD~~




FCC ID: CLHSKYHAWK98

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### 14.1.2 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 below 1 GHz, and the Com Power Microwave Amplifier Model: PA-122 was used for frequencies from 30 MHz to 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 quasi-peak adapter was used only for those readings which are marked accordingly on the data sheets. 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 9.26 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 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.

**SECTION 14.1.2.1**

# *RADIATED EMISSIONS DATA (SPURIOUS AND HARMONICS) FOR THE HANDSET*

# FCC ID: CLHSKYHAWK98



Test location: Compatible Electronics
Customer : S. Megga
Manufacturer : Same
EUT name : 900 MHz DSSS Telephone
Specification: Fcc_B Test distance: 3.0 mtrs
Distance correction factor(20*log(test/spec)) :
Test Mode :
Spurious Emissions Test - Handset Unit

Date : 5/20/1998
Time : 11.41
Model: SKYHAWK 98
Lab: D
: 0.00

| 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 | 36.09 | 56.70 | 0.50 | 12.17 | 38.96 | 30.40 | 40.00 | -9.60 |
| 2V | 144.08 | 44.40 | 1.15 | 13.18 | 38.69 | 20.04 | 43.50 | -23.46 |
| 3V | 201.67 | 44.20 | 1.40 | 15.84 | 38.98 | 22.46 | 43.50 | -21.04 |
| 4V | 230.47 | 47.50 | 1.44 | 16.55 | 38.68 | 26.82 | 46.00 | -19.18 |
| 5V | 268.90 | 45.90 | 1.68 | 18.76 | 38.68 | 27.66 | 46.00 | -18.34 |

# FCC ID: CLHSKYHAWK98



Test location: Compatible Electronics
Customer : S. Megga
Manufacturer : Same
EUT name : 900 MHz DSSS Telephone
Specification: Fcc_B Test distance: 3.0 mtrs
Distance correction factor(20*log(test/spec)) :
Test Mode :
Spurious Emissions Test - Handset Unit

Date : 5/21/1998
Time : 12.11
Model: SKYHAWK 98
Lab: D
: 0.00

| 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 | 124.85 | 50.60 | 1.00 | 11.19 | 39.00 | 23.79 | 43.50 | -19.71 |
| 2H | 144.07 | 50.50 | 1.15 | 13.18 | 38.69 | 26.14 | 43.50 | -17.36 |
| 3H | 153.71 | 48.10 | 1.23 | 13.92 | 38.60 | 24.65 | 43.50 | -18.85 |
| 4H | 198.08 | 44.00 | 1.40 | 15.71 | 38.97 | 22.14 | 43.50 | -21.36 |
| 5H | 230.47 | 44.60 | 1.44 | 16.55 | 38.68 | 23.92 | 46.00 | -22.08 |
| 6H | 240.07 | 47.10 | 1.52 | 16.82 | 38.64 | 26.80 | 46.00 | -19.20 |

**FCC ID: CLHSKYHAWK98**



Test location: Compatible Electronics
Customer : S. Megga Date : 5/21/1998
Manufacturer : Same Time : 1.17
EUT name : 900 MHz DSSS Telephone Model: SKYHAWK 98
Specification: Fcc_B Test distance: 3.0 mtrs Lab: D
Distance correction factor(20*log(test/spec)) : 0.00
Test Mode :
Spurious Emissions Test - Handset Unit

| 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 | 307.27 | 51.30 | 1.81 | 14.03 | 38.64 | 28.50 | 46.00 | -17.50 |
| 2H | 316.86 | 48.60 | 1.83 | 14.07 | 38.70 | 25.80 | 46.00 | -20.20 |
| 3H | 326.46 | 51.60 | 1.85 | 14.11 | 38.76 | 28.80 | 46.00 | -17.20 |
| 4H | 336.07 | 46.50 | 1.87 | 14.14 | 38.82 | 23.70 | 46.00 | -22.30 |
| 5H | 345.69 | 45.50 | 1.89 | 14.18 | 38.87 | 22.70 | 46.00 | -23.30 |
| 6H | 355.32 | 46.20 | 1.91 | 14.81 | 38.84 | 24.08 | 46.00 | -21.92 |
| 7H | 364.87 | 54.10 | 1.93 | 15.89 | 38.72 | 33.20 | 46.00 | -12.80 |
| 8H | 374.46 | 53.20 | 1.95 | 16.99 | 38.61 | 33.53 | 46.00 | -12.47 |
| 9H | 384.07 | 50.50 | 1.97 | 18.08 | 38.56 | 31.99 | 46.00 | -14.01 |
| 10H | 393.72 | 49.70 | 1.99 | 19.18 | 38.53 | 32.35 | 46.00 | -13.65 |
| 11H | 403.27 | 47.80 | 2.01 | 19.61 | 38.48 | 30.94 | 46.00 | -15.06 |
| 12H | 643.29 | 47.90 | 3.35 | 19.39 | 38.59 | 32.05 | 46.00 | -13.95 |
| 13H | 662.53 | 47.30 | 3.43 | 19.90 | 38.45 | 32.18 | 46.00 | -13.82 |

COMPATIBLE ELECTRONICS

FCC ID: CLHSKYHAWK98

# RADIATED EMISSIONS

COMPANY NAME: S. Megga DATE: 5-22-98

EUT: 900MHz DSSS Telephone EUT S/N: N/A

EUT MODEL: SKYHAWK 98 LOCATION: ☑ BREA ☐ SILVERADO ☐ AGOURA

SPECIFICATION: FCC CLASS: ____ TEST DISTANCE: 3m LAB: D

ANTENNA: ☑ LOOP ☐ BICONICAL ☐ LOG ☐ HORN POLARIZATION: ☑ VERT ☑ HORIZ

☑ QUALIFICATION ☐ ENGINEERING ☐ MFG. AUDIT ☐ ENGINEER: Arnold Gifford

NOTES: HANDSET

| Frequency (kHz) | Peak Reading (dBuV) | Avg. ☐ Q.P. ☐ (dBuV) | Antenna Height (meters) | Azimuth (degrees) | Distance Factor (dB) | Antenna Gain (dB) | * Corrected Reading (dBuV) | Delta ** (dB) | Spec Limit (dBuV) |
|---|---|---|---|---|---|---|---|---|---|
| 10kHz – 30MHz NO EMISSIONS FOUND | | | | | | | | | |
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* CORRECTED READING = METER READING - DISTANCE FACTOR - ANTENNA GAIN

** DELTA = CORRECTED READING - SPECIFICATION LIMIT

COMPATIBLE ELECTRONICS _ FCC ID: CLHSKYHAWK98

# *RADIATED EMISSIONS*

COMPANY NAME: S. MEGGA DATE: 5-20-98

EUT: 900 MHZ DSSS TELEPHONE EUT S/N: N/A

EUT MODEL: SKYHAWK 98 LOCATION: ■ BREA ☐ SILVERADO ☐ AGOURA

SPECIFICATION: FCC 15.247 CLASS: — TEST DISTANCE: 3M LAB: D

ANTENNA: ☐ LOOP ☐ BICONICAL ■ LOG ■ HORN POLARIZATION: ■ VERT ☐ HORIZ

■ QUALIFICATION ☐ ENGINEERING ☐ MFG. AUDIT ENGINEER: [signature]

NOTES: LOW CHANNEL

HANDSET UNIT

| Frequency (GHz) | Peak Reading (dBuV) | Average Reading (dBuV) | Antenna Height (meters) | Azimuth (degrees) | Antenna Factor (dB) | Cable Loss (dB) | Amplifier Gain (dB) | * Corrected Reading (dBuV) | Delta ** (dB) | Spec Limit (dBuV) |
|---|---|---|---|---|---|---|---|---|---|---|
| .9039 | 113.0 | 107.0 | 2.0 | 180° | 23.3 | — | 33.3 | 97.0 | — | — |
| 1.807 | 68.1 | 62.1 | 2.0 | 270° | 24.5 | 5.9 | 33.1 | 59.4 | -17.6 | 77.0 |
| 2.710 | 56.3 | 50.3 | 1.0 | 0° | 28.2 | 6.4 | 32.7 | 52.2 | -1.8 | 54.0 |
| 3.614 | 53.4 | 47.4 | 1.5 | 0° | 29.6 | 8.5 | 32.1 | 53.4 | -0.6 | 54.0 |
| 4.517 | 41.2 | 35.2 | 1.0 | 90° | 30.9 | 9.8 | 31.5 | 44.4 | -9.6 | 54.0 |
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*** CORRECTED READING** = METER READING + ANTENNA FACTOR + CABLE LOSS - AMPLIFIER GAIN

**** DELTA** = CORRECTED READING - SPECIFICATION LIMIT

COMPATIBLE ELECTRONICS

FCC ID: CLHSKYHAWK98



# RADIATED EMISSIONS

COMPANY NAME: S. MEGGA DATE: 5-20-98

EUT: 900 MHZ DSSS TELEPHONE EUT S/N: N/A

EUT MODEL: SKYHAWK 98 LOCATION: ■ BREA ☐ SILVERADO ☐ AGOURA

SPECIFICATION: FCC 15.247 CLASS: — TEST DISTANCE: 3M LAB: D

ANTENNA: ☐ LOOP ☐ BICONICAL ■ LOG ■ HORN POLARIZATION: ☐ VERT ■ HORIZ

■ QUALIFICATION ☐ ENGINEERING ☐ MFG. AUDIT ENGINEER: DAN VOEBELE

NOTES: LOW CHANNEL

HANDSET UNIT

| Frequency (GHz) | Peak Reading (dBuV) | Average Reading (dBuV) | Antenna Height (meters) | Azimuth (degrees) | Antenna Factor (dB) | Cable Loss (dB) | Amplifier Gain (dB) | * Corrected Reading (dBuV) | Delta ** (dB) | Spec Limit (dBuV) |
|---|---|---|---|---|---|---|---|---|---|---|
| .9039 | 112.8 | 106.8 | 1.5 | 180° | 23.3 | — | 33.3 | 96.8 | — | — |
| 1.807 | 63.3 | 57.3 | 2.0 | 0° | 24.5 | 5.9 | 33.1 | 54.6 | -22.7 | 76.8 |
| 2.710 | 52.9 | 46.9 | 1.5 | 90° | 28.2 | 6.4 | 32.7 | 48.8 | -5.2 | 54.0 |
| 3.614 | 48.7 | 42.7 | 1.5 | 90° | 29.6 | 8.5 | 32.1 | 48.7 | -5.3 | 54.0 |
| 4.517 | 41.1 | 35.1 | 2.0 | 180° | 30.9 | 9.8 | 31.5 | 44.3 | -9.7 | 54.0 |
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* CORRECTED READING = METER READING + ANTENNA FACTOR + CABLE LOSS - AMPLIFIER GAIN

** DELTA = CORRECTED READING - SPECIFICATION LIMIT

# RADIATED EMISSIONS

COMPANY NAME: S. MEGGA DATE: 5-20-98

EUT: 900 MHZ DSSS TELEPHONE EUT S/N: N/A

EUT MODEL: SKYHAWK 98 LOCATION: ■ BREA ☐ SILVERADO ☐ AGOURA

SPECIFICATION: FCC 15.247 CLASS: — TEST DISTANCE: 3M LAB: D

ANTENNA: ☐ LOOP ☐ BICONICAL ■ LOG ■ HORN POLARIZATION: ■ VERT ☐ HORIZ

■ QUALIFICATION ☐ ENGINEERING ☐ MFG. AUDIT ENGINEER: BRIAN VEGGELE

NOTES: MIDDLE CHANNEL
HANDSET UNIT

| Frequency (GHz) | Peak Reading (dBuV) | Average Reading (dBuV) | Antenna Height (meters) | Azimuth (degrees) | Antenna Factor (dB) | Cable Loss (dB) | Amplifier Gain (dB) | * Corrected Reading (dBuV) | Delta ** (dB) | Spec Limit (dBuV) |
|---|---|---|---|---|---|---|---|---|---|---|
| .9148 | 113.0 | 107.0 | 1.0 | 270° | 23.2 | — | 33.2 | 97.0 | — | — |
| 1.828 | 64.6 | 58.6 | 2.0 | 270° | 24.5 | 5.9 | 33.1 | 55.9 | -21.1 | 77.0 |
| 2.743 | 51.7 | 45.7 | 2.0 | 0° | 28.2 | 6.4 | 32.7 | 47.6 | -6.4 | 54.0 |
| 3.657 | 51.0 | 45.0 | 1.5 | 0° | 29.6 | 8.5 | 32.1 | 51.0 | -3.0 | 54.0 |
| 4.572 | 41.4 | 35.4 | 1.0 | 0° | 30.9 | 9.8 | 31.5 | 44.6 | -9.4 | 54.0 |
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* **CORRECTED READING** = METER READING + ANTENNA FACTOR + CABLE LOSS - AMPLIFIER GAIN

** **DELTA** = CORRECTED READING - SPECIFICATION LIMIT

COMPATIBLE ELECTRONICS FCC ID: CLHSKYHAWK98 PAGE 4 of 6

## RADIATED EMISSIONS

COMPANY NAME: S. MEGA DATE: 5-20-98

EUT: 900 MHz DSSS TELEPHONE EUT S/N: N/A

EUT MODEL: SKYHAWK 98 LOCATION: ■ BREA ☐ SILVERADO ☐ AGOURA

SPECIFICATION: FCC 15.247 CLASS: — TEST DISTANCE: 3M LAB: D

ANTENNA: ☐ LOOP ☐ BICONICAL ■ LOG ■ HORN POLARIZATION: ☐ VERT ■ HORIZ

■ QUALIFICATION ☐ ENGINEERING ☐ MFG. AUDIT ENGINEER: Brian Vogel

NOTES: MIDDLE CHANNEL
HANDSET UNIT

| Frequency (GHz) | Peak Reading (dBuV) | Average Reading (dBuV) | Antenna Height (meters) | Azimuth (degrees) | Antenna Factor (dB) | Cable Loss (dB) | Amplifier Gain (dB) | * Corrected Reading (dBuV) | Delta ** (dB) | Spec Limit (dBuV) |
|---|---|---|---|---|---|---|---|---|---|---|
| .9147 | 112.8 | 106.8 | 2.0 | 180° | 23.2 | — | 33.2 | 96.8 | — | — |
| 1.828 | 60.4 | 54.4 | 1.5 | 180° | 24.5 | 5.9 | 33.1 | 51.7 | -25.1 | 76.8 |
| 2.743 | 49.0 | 43.0 | 1.5 | 180° | 28.2 | 6.4 | 32.7 | 44.9 | -9.1 | 54.0 |
| 3.657 | 47.2 | 41.2 | 1.5 | 180° | 29.6 | 8.5 | 32.1 | 47.2 | -6.8 | 54.0 |
| 4.572 | 40.8 | 34.8 | 1.5 | 90° | 30.9 | 9.8 | 31.5 | 44.0 | -10.0 | 54.0 |
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* CORRECTED READING = METER READING + ANTENNA FACTOR + CABLE LOSS - AMPLIFIER GAIN

** DELTA = CORRECTED READING - SPECIFICATION LIMIT

COMPATIBLE ELECTRONICS

FCC ID: CLHSKYHAWK98



# RADIATED EMISSIONS

COMPANY NAME: S. MEGDA DATE: 5-20-98

EUT: 900 MHZ DSSS TELEPHONE EUT S/N: N/A

EUT MODEL: SKYHAWK 98 LOCATION: ■ BREA ☐ SILVERADO ☐ AGOURA

SPECIFICATION: FCC 15.247 CLASS: — TEST DISTANCE: 3M LAB: D

ANTENNA: ☐ LOOP ☐ BICONICAL ☐ LOG ■ HORN POLARIZATION: ■ VERT ☐ HORIZ

■ QUALIFICATION ☐ ENGINEERING ☐ MFG. AUDIT ENGINEER: Brian Vegdahl

NOTES: HIGH CHANNEL
HANDSET

| Frequency (GHz) | Peak Reading (dBuV) | Average Reading (dBuV) | Antenna Height (meters) | Azimuth (degrees) | Antenna Factor (dB) | Cable Loss (dB) | Amplifier Gain (dB) | * Corrected Reading (dBuV) | Delta ** (dB) | Spec Limit (dBuV) |
|---|---|---|---|---|---|---|---|---|---|---|
| .9268 | 113.3 | 107.3 | 1.0 | 270° | 23.2 | — | 33.1 | 97.4 | — | — |
| 1.852 | 60.8 | 54.8 | 1.5 | 270° | 24.5 | 5.7 | 32.9 | 51.4 | -26.0 | 77.4 |
| 2.779 | 53.9 | 47.9 | 2.0 | 0° | 29.7 | 7.4 | 32.4 | 52.6 | -1.4 | 54.0 |
| 3.705 | 46.8 | 40.8 | 1.5 | 90° | 29.6 | 8.5 | 32.1 | 46.8 | -7.2 | 54.0 |
| 4.631 | 38.4 | 32.4 | 1.0 | 0° | 30.9 | 9.8 | 31.5 | 41.6 | -12.4 | 54.0 |
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* CORRECTED READING = METER READING + ANTENNA FACTOR + CABLE LOSS - AMPLIFIER GAIN

** DELTA = CORRECTED READING - SPECIFICATION LIMIT

COMPATIBLE ELECTRONICS — FCC ID: CLHSKYHAWK98 PAGE 6 of 6

# RADIATED EMISSIONS

COMPANY NAME: S. MEGGA DATE: 5-20-98

EUT: 900 MHZ DSSS TELEPHONE EUT S/N: N/A

EUT MODEL: SKYHAWK 98 LOCATION: ■ BREA ☐ SILVERADO ☐ AGOURA

SPECIFICATION: FCC 15.247 CLASS: — TEST DISTANCE: 3M LAB: D

ANTENNA: ☐ LOOP ☐ BICONICAL ■ LOG ■ HORN POLARIZATION: ☐ VERT ■ HORIZ

■ QUALIFICATION ☐ ENGINEERING ☐ MFG. AUDIT ENGINEER: Brian Voegeca

NOTES: HIGH CHANNEL
HANDSET UNIT

| Frequency (GHz) | Peak Reading (dBuV) | Average Reading (dBuV) | Antenna Height (meters) | Azimuth (degrees) | Antenna Factor (dB) | Cable Loss (dB) | Amplifier Gain (dB) | * Corrected Reading (dBuV) | Delta ** (dB) | Spec Limit (dBuV) |
|---|---|---|---|---|---|---|---|---|---|---|
| .9268 | 112.2 | 106.2 | 2.0 | 0° | 23.2 | — | 33.1 | 96.3 | — | — |
| 1.852 | 60.1 | 54.1 | 1.0 | 0° | 24.5 | 5.7 | 32.9 | 51.4 | -24.9 | 76.3 |
| 2.779 | 50.3 | 44.3 | 2.0 | 0° | 29.7 | 7.4 | 32.4 | 49.0 | -5.0 | 54.0 |
| 3.705 | 43.9 | 37.9 | 1.0 | 270° | 29.6 | 8.5 | 32.1 | 43.9 | -10.1 | 54.0 |
| 4.632 | 39.1 | 32.1 | 1.0 | 180° | 30.9 | 9.8 | 31.5 | 41.3 | -12.7 | 54.0 |
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* **CORRECTED READING** = METER READING + ANTENNA FACTOR + CABLE LOSS - AMPLIFIER GAIN

** **DELTA** = CORRECTED READING - SPECIFICATION LIMIT

**SECTION 14.1.2.2**

# *RADIATED EMISSIONS DATA (SPURIOUS AND HARMONICS) FOR THE BASE*

# FCC ID: CLHSKYHAWK98



Test location: Compatible Electronics
Customer : S. MEGGA
Manufacturer : S. MEGGA
EUT name : 900 MHz DSSS TELEPHONE
Specification: Fcc_B Test distance: 3.0 mtrs
Distance correction factor(20*log(test/spec))
Test Mode :
SPURIOUS EMISSIONS TEST - BASE UNIT
TEST ENGINEER: ARNOLD GAFFUD
QUALIFICATION DATA

Date : 5/22/1998
Time : 11.41
Model:
Lab: D
: 0.00

| 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 | 33.06 | 63.20 | 0.50 | 12.68 | 38.93 | 37.45 | 40.00 | -2.55 |
| 2V | 33.07 | 61.31 | 0.50 | 12.68 | 38.93 | 35.56Qp | 40.00 | -4.44 |
| 3V | 48.05 | 61.00 | 0.58 | 11.50 | 39.00 | 34.08 | 40.00 | -5.92 |
| 4V | 50.47 | 58.20 | 0.60 | 11.46 | 39.00 | 31.27 | 40.00 | -8.73 |
| 5V | 52.84 | 63.50 | 0.63 | 11.27 | 38.97 | 36.43 | 40.00 | -3.57 |
| 6V | 57.64 | 62.40 | 0.68 | 10.89 | 38.92 | 35.04 | 40.00 | -4.96 |
| 7V | 60.06 | 61.10 | 0.70 | 10.69 | 38.90 | 33.60 | 40.00 | -6.40 |
| 8V | 62.45 | 58.30 | 0.70 | 10.48 | 38.83 | 30.65 | 40.00 | -9.35 |
| 9V | 120.06 | 52.70 | 0.98 | 10.90 | 38.90 | 25.68 | 43.50 | -17.82 |
| 10V | 124.85 | 52.60 | 1.00 | 11.19 | 39.00 | 25.79 | 43.50 | -17.71 |
| 11V | 139.26 | 55.60 | 1.11 | 12.68 | 38.77 | 30.63 | 43.50 | -12.87 |
| 12V | 144.05 | 57.00 | 1.15 | 13.18 | 38.70 | 32.64 | 43.50 | -10.86 |
| 13V | 153.70 | 56.00 | 1.23 | 13.92 | 38.60 | 32.55 | 43.50 | -10.95 |
| 14V | 162.06 | 50.30 | 1.30 | 14.19 | 38.60 | 27.18 | 43.50 | -16.32 |
| 15V | 163.31 | 56.50 | 1.31 | 14.23 | 38.60 | 33.43 | 43.50 | -10.07 |
| 16V | 223.83 | 48.10 | 1.40 | 16.37 | 38.71 | 27.16 | 46.00 | -18.84 |
| 17V | 231.05 | 47.70 | 1.45 | 16.57 | 38.68 | 27.04 | 46.00 | -18.96 |
| 18V | 264.04 | 49.10 | 1.66 | 18.34 | 38.66 | 30.44 | 46.00 | -15.56 |
| 19V | 297.66 | 41.70 | 1.79 | 21.11 | 38.61 | 25.99 | 46.00 | -20.01 |
| 20V | 307.25 | 51.40 | 1.81 | 14.03 | 38.64 | 28.60 | 46.00 | -17.40 |
| 21V | 316.85 | 47.30 | 1.83 | 14.07 | 38.70 | 24.50 | 46.00 | -21.50 |
| 22V | 326.46 | 50.30 | 1.85 | 14.11 | 38.76 | 27.50 | 46.00 | -18.50 |
| 23V | 336.07 | 50.80 | 1.87 | 14.14 | 38.82 | 28.00 | 46.00 | -18.00 |
| 24V | 345.65 | 48.70 | 1.89 | 14.18 | 38.87 | 25.90 | 46.00 | -20.10 |
| 25V | 360.10 | 46.80 | 1.92 | 15.35 | 38.78 | 25.29 | 46.00 | -20.71 |
| 26V | 364.85 | 50.40 | 1.93 | 15.89 | 38.72 | 29.50 | 46.00 | -16.50 |
| 27V | 369.69 | 47.40 | 1.94 | 16.44 | 38.66 | 27.12 | 46.00 | -18.88 |
| 28V | 374.51 | 48.90 | 1.95 | 16.99 | 38.61 | 29.24 | 46.00 | -16.76 |
| 29V | 379.29 | 46.10 | 1.96 | 17.54 | 38.58 | 27.02 | 46.00 | -18.98 |
| 30V | 384.09 | 48.70 | 1.97 | 18.09 | 38.56 | 30.19 | 46.00 | -15.81 |

# FCC ID: CLHSKYHAWK98



Test location: Compatible Electronics
Customer : S. MEGGA
Manufacturer : S. MEGGA
EUT name : 900 MHz DSSS TELEPHONE
Specification: Fcc_B Test distance: 3.0 mtrs
Distance correction factor(20*log(test/spec))
Test Mode :
SPURIOUS EMISSIONS TEST - BASE UNIT
TEST ENGINEER: ARNOLD GAFFUD
QUALIFICATION DATA

Date : 5/22/1998
Time : 11.41
Model:
Lab: D
: 0.00

| 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 |
|---|---|---|---|---|---|---|---|---|
| 31V | 388.85 | 44.60 | 1.98 | 18.63 | 38.54 | 26.66 | 46.00 | -19.34 |
| 32V | 393.65 | 46.90 | 1.99 | 19.18 | 38.53 | 29.54 | 46.00 | -16.46 |
| 33V | 398.47 | 43.40 | 2.00 | 19.73 | 38.51 | 26.62 | 46.00 | -19.38 |
| 34V | 403.26 | 44.50 | 2.01 | 19.61 | 38.48 | 27.64 | 46.00 | -18.36 |
| 35V | 422.45 | 46.40 | 2.09 | 17.88 | 38.37 | 28.00 | 46.00 | -18.00 |
| 36V | 429.04 | 47.20 | 2.12 | 17.29 | 38.33 | 28.28 | 46.00 | -17.72 |
| 37V | 432.11 | 49.30 | 2.13 | 17.01 | 38.31 | 30.13 | 46.00 | -15.87 |
| 38V | 436.84 | 47.50 | 2.15 | 16.58 | 38.28 | 27.95 | 46.00 | -18.05 |
| 39V | 441.65 | 49.80 | 2.17 | 16.15 | 38.25 | 29.87 | 46.00 | -16.13 |
| 40V | 446.52 | 47.80 | 2.19 | 15.71 | 38.22 | 27.48 | 46.00 | -18.52 |
| 41V | 451.26 | 50.10 | 2.21 | 15.43 | 38.21 | 29.53 | 46.00 | -16.47 |
| 42V | 456.08 | 44.20 | 2.24 | 15.55 | 38.26 | 23.72 | 46.00 | -22.28 |
| 43V | 470.47 | 46.50 | 2.32 | 15.89 | 38.40 | 26.31 | 46.00 | -19.69 |
| 44V | 480.06 | 45.60 | 2.38 | 16.12 | 38.50 | 25.60 | 46.00 | -20.40 |
| 45V | 484.87 | 45.50 | 2.41 | 16.24 | 38.55 | 25.60 | 46.00 | -20.40 |
| 46V | 489.65 | 50.20 | 2.44 | 16.35 | 38.60 | 30.39 | 46.00 | -15.61 |
| 47V | 499.26 | 56.70 | 2.50 | 16.58 | 38.69 | 37.09 | 46.00 | -8.91 |
| 48V | 518.46 | 53.10 | 2.65 | 16.38 | 38.48 | 33.65 | 46.00 | -12.35 |
| 49V | 528.05 | 50.00 | 2.72 | 16.26 | 38.36 | 30.62 | 46.00 | -15.38 |
| 50V | 537.66 | 48.90 | 2.80 | 16.15 | 38.25 | 29.60 | 46.00 | -16.40 |
| 51V | 547.27 | 49.00 | 2.88 | 16.03 | 38.13 | 29.78 | 46.00 | -16.22 |
| 52V | 556.84 | 49.40 | 2.91 | 16.37 | 38.15 | 30.53 | 46.00 | -15.47 |
| 53V | 566.46 | 49.20 | 2.93 | 16.89 | 38.23 | 30.79 | 46.00 | -15.21 |
| 54V | 576.07 | 44.60 | 2.95 | 17.41 | 38.31 | 26.65 | 46.00 | -19.35 |
| 55V | 585.66 | 45.10 | 2.97 | 17.93 | 38.39 | 27.61 | 46.00 | -18.39 |
| 56V | 590.52 | 41.80 | 2.98 | 18.19 | 38.42 | 24.55 | 46.00 | -21.45 |
| 57V | 604.87 | 45.40 | 3.04 | 18.78 | 38.51 | 28.71 | 46.00 | -17.29 |
| 58V | 614.45 | 47.80 | 3.12 | 18.93 | 38.53 | 31.32 | 46.00 | -14.68 |
| 59V | 619.30 | 46.90 | 3.15 | 19.01 | 38.54 | 30.52 | 46.00 | -15.48 |
| 60V | 624.06 | 44.00 | 3.19 | 19.08 | 38.55 | 27.73 | 46.00 | -18.27 |

# FCC ID: CLHSKYHAWK98



Test location: Compatible Electronics
Customer : S. MEGGA
Manufacturer : S. MEGGA
EUT name : 900 MHz DSSS TELEPHONE
Specification: Fcc_B Test distance: 3.0 mtrs
Distance correction factor(20*log(test/spec))
Test Mode :
SPURIOUS EMISSIONS TEST - BASE UNIT
TEST ENGINEER: ARNOLD GAFFUD
QUALIFICATION DATA

Date : 5/22/1998
Time : 11.41
Model:
Lab: D
: 0.00

| 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 |
|---|---|---|---|---|---|---|---|---|
| 61V | 633.66 | 48.40 | 3.27 | 19.24 | 38.57 | 32.34 | 46.00 | -13.66 |
| 62V | 643.32 | 45.60 | 3.35 | 19.39 | 38.59 | 29.75 | 46.00 | -16.25 |
| 63V | 652.85 | 49.50 | 3.41 | 19.59 | 38.57 | 33.93 | 46.00 | -12.07 |
| 64V | 672.09 | 49.60 | 3.44 | 20.21 | 38.33 | 34.92 | 46.00 | -11.08 |
| 65V | 691.27 | 45.50 | 3.48 | 20.82 | 38.10 | 31.70 | 46.00 | -14.30 |
| 66V | 700.86 | 44.80 | 3.51 | 21.14 | 38.00 | 31.44 | 46.00 | -14.56 |
| 67V | 739.30 | 45.20 | 3.74 | 23.06 | 38.16 | 33.84 | 46.00 | -12.16 |
| 68V | 748.87 | 46.40 | 3.79 | 23.54 | 38.20 | 35.54 | 46.00 | -10.46 |
| 69V | 768.08 | 48.60 | 3.94 | 22.88 | 38.02 | 37.40 | 46.00 | -8.60 |
| 70V | 777.64 | 43.60 | 4.02 | 22.49 | 37.92 | 32.19 | 46.00 | -13.81 |
| 71V | 787.27 | 44.40 | 4.10 | 22.11 | 37.83 | 32.78 | 46.00 | -13.22 |
| 72V | 796.85 | 46.30 | 4.17 | 21.73 | 37.73 | 34.47 | 46.00 | -11.53 |
| 73V | 816.06 | 46.40 | 4.20 | 22.08 | 37.83 | 34.85 | 46.00 | -11.15 |
| 74V | 825.65 | 43.50 | 4.20 | 22.37 | 37.91 | 32.16 | 46.00 | -13.84 |
| 75V | 835.25 | 46.30 | 4.20 | 22.66 | 37.98 | 35.18 | 46.00 | -10.82 |
| 76V | 844.86 | 43.70 | 4.20 | 22.95 | 38.06 | 32.79 | 46.00 | -13.21 |
| 77V | 854.45 | 47.10 | 4.19 | 23.12 | 38.05 | 36.36 | 46.00 | -9.64 |
| 78V | 892.86 | 47.50 | 4.11 | 23.27 | 37.59 | 37.30 | 46.00 | -8.70 |
| 79V | 950.46 | 41.50 | 4.30 | 22.99 | 37.01 | 31.79 | 46.00 | -14.21 |

# FCC ID: CLHSKYHAWK98



Test location: Compatible Electronics
Customer : S. MEGGA
Manufacturer : S. MEGGA
EUT name : 900 MHz DSSS TELEPHONE
Specification: Fcc_B Test distance: 3.0 mtrs
Distance correction factor(20*log(test/spec))
Test Mode :
SPURIOUS EMISSIONS TEST - BASE UNIT
TEST ENGINEER: ARNOLD GAFFUD
QUALIFICATION DATA

Date : 5/22/1998
Time : 15.00
Model:
Lab: D
: 0.00

| 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 | 33.05 | 46.10 | 0.50 | 12.68 | 38.93 | 20.35 | 40.00 | -19.65 |
| 2H | 46.83 | 51.50 | 0.57 | 11.50 | 39.00 | 24.57 | 40.00 | -15.43 |
| 3H | 57.64 | 56.00 | 0.68 | 10.89 | 38.92 | 28.64 | 40.00 | -11.36 |
| 4H | 60.05 | 54.90 | 0.70 | 10.70 | 38.90 | 27.40 | 40.00 | -12.60 |
| 5H | 68.99 | 49.50 | 0.70 | 9.89 | 38.63 | 21.46 | 40.00 | -18.54 |
| 6H | 70.83 | 47.80 | 0.70 | 9.72 | 38.58 | 19.64 | 40.00 | -20.36 |
| 7H | 114.54 | 49.50 | 0.96 | 10.57 | 38.79 | 22.24 | 43.50 | -21.26 |
| 8H | 120.06 | 52.90 | 0.98 | 10.90 | 38.90 | 25.88 | 43.50 | -17.62 |
| 9H | 124.85 | 54.30 | 1.00 | 11.19 | 39.00 | 27.49 | 43.50 | -16.01 |
| 10H | 129.67 | 50.20 | 1.04 | 11.69 | 38.93 | 24.00 | 43.50 | -19.50 |
| 11H | 139.25 | 54.10 | 1.11 | 12.68 | 38.77 | 29.12 | 43.50 | -14.38 |
| 12H | 144.05 | 61.10 | 1.15 | 13.18 | 38.70 | 36.74 | 43.50 | -6.76 |
| 13H | 148.85 | 53.90 | 1.19 | 13.68 | 38.62 | 30.15 | 43.50 | -13.35 |
| 14H | 152.07 | 50.30 | 1.22 | 13.87 | 38.60 | 26.78 | 43.50 | -16.72 |
| 15H | 153.66 | 52.00 | 1.23 | 13.92 | 38.60 | 28.55 | 43.50 | -14.95 |
| 16H | 185.78 | 47.90 | 1.40 | 15.12 | 38.77 | 25.65 | 43.50 | -17.85 |
| 17H | 230.46 | 46.30 | 1.44 | 16.55 | 38.68 | 25.62 | 46.00 | -20.38 |
| 18H | 240.10 | 47.70 | 1.52 | 16.82 | 38.64 | 27.40 | 46.00 | -18.60 |
| 19H | 264.06 | 46.20 | 1.66 | 18.34 | 38.66 | 27.54 | 46.00 | -18.46 |
| 20H | 288.05 | 42.40 | 1.75 | 20.34 | 38.65 | 25.85 | 46.00 | -20.15 |
| 21H | 297.65 | 45.10 | 1.79 | 21.11 | 38.61 | 29.39 | 46.00 | -16.61 |
| 22H | 302.51 | 48.70 | 1.81 | 14.01 | 38.62 | 25.90 | 46.00 | -20.10 |
| 23H | 307.30 | 54.90 | 1.81 | 14.03 | 38.64 | 32.10 | 46.00 | -13.90 |
| 24H | 316.84 | 59.60 | 1.83 | 14.07 | 38.70 | 36.80 | 46.00 | -9.20 |
| 25H | 326.46 | 58.20 | 1.85 | 14.11 | 38.76 | 35.40 | 46.00 | -10.60 |
| 26H | 336.05 | 59.60 | 1.87 | 14.14 | 38.82 | 36.80 | 46.00 | -9.20 |
| 27H | 345.66 | 55.20 | 1.89 | 14.18 | 38.87 | 32.40 | 46.00 | -13.60 |
| 28H | 364.85 | 56.30 | 1.93 | 15.89 | 38.72 | 35.40 | 46.00 | -10.60 |
| 29H | 379.26 | 54.10 | 1.96 | 17.54 | 38.58 | 35.01 | 46.00 | -10.99 |
| 30H | 384.11 | 57.40 | 1.97 | 18.09 | 38.56 | 38.89 | 46.00 | -7.11 |

**FCC ID: CLHSKYHAWK98**



Test location: Compatible Electronics
Customer : S. MEGGA
Manufacturer : S. MEGGA
EUT name : 900 MHz DSSS TELEPHONE
Specification: Fcc_B Test distance: 3.0 mtrs
Distance correction factor(20*log(test/spec))
Test Mode :
SPURIOUS EMISSIONS TEST - BASE UNIT
TEST ENGINEER: ARNOLD GAFFUD
QUALIFICATION DATA

Date : 5/22/1998
Time : 15.00
Model:
Lab: D
: 0.00

| 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 |
|---|---|---|---|---|---|---|---|---|
| 31H | 388.84 | 52.60 | 1.98 | 18.63 | 38.54 | 34.66 | 46.00 | -11.34 |
| 32H | 398.45 | 52.80 | 2.00 | 19.72 | 38.51 | 36.01 | 46.00 | -9.99 |
| 33H | 403.25 | 54.60 | 2.01 | 19.61 | 38.48 | 37.74 | 46.00 | -8.26 |
| 34H | 412.88 | 51.90 | 2.05 | 18.74 | 38.42 | 34.27 | 46.00 | -11.73 |
| 35H | 432.05 | 49.20 | 2.13 | 17.02 | 38.31 | 30.04 | 46.00 | -15.96 |
| 36H | 436.86 | 48.00 | 2.15 | 16.58 | 38.28 | 28.45 | 46.00 | -17.55 |
| 37H | 451.26 | 56.40 | 2.21 | 15.43 | 38.21 | 35.83 | 46.00 | -10.17 |
| 38H | 465.69 | 53.80 | 2.29 | 15.78 | 38.36 | 33.51 | 46.00 | -12.49 |
| 39H | 470.47 | 59.20 | 2.32 | 15.89 | 38.40 | 39.01 | 46.00 | -6.99 |
| 40H | 475.30 | 51.90 | 2.35 | 16.01 | 38.45 | 31.81 | 46.00 | -14.19 |
| 41H | 480.05 | 57.20 | 2.38 | 16.12 | 38.50 | 37.20 | 46.00 | -8.80 |
| 42H | 484.91 | 53.70 | 2.41 | 16.24 | 38.55 | 33.80 | 46.00 | -12.20 |
| 43H | 489.67 | 59.50 | 2.44 | 16.35 | 38.60 | 39.69 | 46.00 | -6.31 |
| 44H | 499.27 | 59.90 | 2.50 | 16.58 | 38.69 | 40.29 | 46.00 | -5.71 |
| 45H | 508.87 | 55.10 | 2.57 | 16.49 | 38.59 | 35.57 | 46.00 | -10.43 |
| 46H | 518.46 | 54.70 | 2.65 | 16.38 | 38.48 | 35.25 | 46.00 | -10.75 |
| 47H | 528.06 | 56.80 | 2.72 | 16.26 | 38.36 | 37.42 | 46.00 | -8.58 |
| 48H | 537.65 | 52.00 | 2.80 | 16.15 | 38.25 | 32.70 | 46.00 | -13.30 |
| 49H | 576.07 | 44.50 | 2.95 | 17.41 | 38.31 | 26.55 | 46.00 | -19.45 |
| 50H | 614.46 | 45.80 | 3.12 | 18.93 | 38.53 | 29.32 | 46.00 | -16.68 |
| 51H | 624.08 | 44.20 | 3.19 | 19.09 | 38.55 | 27.93 | 46.00 | -18.07 |
| 52H | 662.45 | 48.90 | 3.42 | 19.90 | 38.45 | 33.77 | 46.00 | -12.23 |
| 53H | 672.06 | 51.60 | 3.44 | 20.21 | 38.34 | 36.91 | 46.00 | -9.09 |
| 54H | 681.67 | 49.00 | 3.46 | 20.51 | 38.22 | 34.76 | 46.00 | -11.24 |
| 55H | 691.25 | 49.50 | 3.48 | 20.82 | 38.10 | 35.70 | 46.00 | -10.30 |
| 56H | 700.91 | 51.70 | 3.51 | 21.15 | 38.00 | 38.35 | 46.00 | -7.65 |
| 57H | 720.06 | 45.80 | 3.62 | 22.10 | 38.08 | 33.44 | 46.00 | -12.56 |
| 58H | 739.27 | 48.60 | 3.74 | 23.06 | 38.16 | 37.24 | 46.00 | -8.76 |
| 59H | 758.44 | 48.20 | 3.87 | 23.26 | 38.12 | 37.21 | 46.00 | -8.79 |
| 60H | 768.05 | 50.20 | 3.94 | 22.88 | 38.02 | 39.00 | 46.00 | -7.00 |

**FCC ID: CLHSKYHAWK98**



Test location: Compatible Electronics
Customer : S. MEGGA
Manufacturer : S. MEGGA
EUT name : 900 MHz DSSS TELEPHONE
Specification: Fcc_B Test distance: 3.0 mtrs
Distance correction factor(20*log(test/spec))
Test Mode :
SPURIOUS EMISSIONS TEST - BASE UNIT
TEST ENGINEER: ARNOLD GAFFUD
QUALIFICATION DATA

Date : 5/22/1998
Time : 15.00
Model:
Lab: D
: 0.00

| 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 |
|---|---|---|---|---|---|---|---|---|
| 61H | 787.26 | 46.30 | 4.10 | 22.11 | 37.83 | 34.68 | 46.00 | -11.32 |
| 62H | 796.85 | 46.10 | 4.17 | 21.73 | 37.73 | 34.27 | 46.00 | -11.73 |
| 63H | 844.86 | 44.10 | 4.20 | 22.95 | 38.06 | 33.19 | 46.00 | -12.81 |

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COMPATIBLE ELECTRONICS

FCC ID: CLHSKYHAWK98

## RADIATED EMISSIONS

COMPANY NAME: S. MEGGA DATE: 5-22-98

EUT: 900 MHz DSSS Telephone EUT S/N: N/A

EUT MODEL: SKYHAWK 98 LOCATION: ☑ BREA ☐ SILVERADO ☐ AGOURA

SPECIFICATION: FCC CLASS: _____ TEST DISTANCE: 3m LAB: D

ANTENNA: ☑ LOOP ☐ BICONICAL ☐ LOG ☐ HORN POLARIZATION: ☑ VERT ☑ HORIZ

☑ QUALIFICATION ☐ ENGINEERING ☐ MFG. AUDIT ☐ ENGINEER: Arnold Gifford

NOTES: BASE UNIT

| Frequency (kHz) | Peak Reading (dBuV) | Avg. ☐ Q.P. ☐ (dBuV) | Antenna Height (meters) | Azimuth (degrees) | Distance Factor (dB) | Antenna Gain (dB) | * Corrected Reading (dBuV) | Delta ** (dB) | Spec Limit (dBuV) |
|---|---|---|---|---|---|---|---|---|---|
| 10KHz - 30MHz : NO EMISSIONS FOUND | | | | | | | | | |
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* **CORRECTED READING** = METER READING - DISTANCE FACTOR - ANTENNA GAIN

** **DELTA** = CORRECTED READING - SPECIFICATION LIMIT

COMPATIBLE ELECTRONICS — FCC ID: CLHSKYHAWK98

# RADIATED EMISSIONS

COMPANY NAME: S. MEGGA DATE: 5-19-98

EUT: 900 MHZ DIGITAL SPREAD SPECTRUM TELEPHONE EUT S/N: N/A

EUT MODEL: SKYHAWK 98 LOCATION: ☒ BREA ☐ SILVERADO ☐ AGOURA

SPECIFICATION: FCC 15.247 CLASS: NONE TEST DISTANCE: 3m LAB: D

ANTENNA: ☐ LOOP ☐ BICONICAL ☒ LOG ☒ HORN POLARIZATION: ☒ VERT ☐ HORIZ

☒ QUALIFICATION ☐ ENGINEERING ☐ MFG. AUDIT ENGINEER: BRIAN VOEGELE

NOTES: LOW CHAN – BASE UNIT

| Frequency (GHz) | Peak Reading (dBuV) | Average Reading (dBuV) | Antenna Height (meters) | Azimuth (degrees) | Antenna Factor (dB) | Cable Loss (dB) | Amplifier Gain (dB) | * Corrected Reading (dBuV) | Delta ** (dB) | Spec Limit (dBuV) |
|---|---|---|---|---|---|---|---|---|---|---|
| .9034 | 113.5 | 107.5 | 2.0 | 180° | 23.3 | – | 33.3 | 97.5 | – | – |
| 1.807 | 48.8 | 42.8 | 1.5 | 0° | 24.5 | 5.9 | 33.1 | 40.1 | -37.4 | 77.5 |
| 2.710 | 44.0 | 38.0 | 1.0 | 180° | 28.2 | 6.4 | 32.7 | 39.9 | -14.1 | 54.0 |
| 3.614 | 44.0 | 38.0 | 1.0 | 180° | 29.6 | 8.5 | 32.1 | 44.0 | -10.0 | 54.0 |
| 4.518 | 40.3 | 34.3 | 1.0 | 180° | 30.9 | 9.8 | 31.5 | 43.5 | -10.5 | 54.0 |
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* **CORRECTED READING** = METER READING + ANTENNA FACTOR + CABLE LOSS - AMPLIFIER GAIN

** **DELTA** = CORRECTED READING - SPECIFICATION LIMIT

COMPATIBLE ELECTRONICS — FCC ID: CLHSKYHAWK98



# RADIATED EMISSIONS

COMPANY NAME: S. MEGGA DATE: 5-19-98

EUT: 900 MHz DIGITAL SPREAD SPECTRUM TELEPHONE EUT S/N: N/A

EUT MODEL: SKYHAWK 98 LOCATION: ☒ BREA ☐ SILVERADO ☐ AGOURA

SPECIFICATION: 15.247 CLASS: NONE TEST DISTANCE: 3M LAB: D

ANTENNA: ☐ LOOP ☐ BICONICAL ☒ LOG ☒ HORN POLARIZATION: ☐ VERT ☒ HORIZ

☒ QUALIFICATION ☐ ENGINEERING ☐ MFG. AUDIT ENGINEER: BILL VOEGELE

NOTES: LOW CHAN. - BASE UNIT

| | Frequency (GHz) | Peak Reading (dBuV) | Average Reading (dBuV) | Antenna Height (meters) | Azimuth (degrees) | Antenna Factor (dB) | Cable Loss (dB) | Amplifier Gain (dB) | * Corrected Reading (dBuV) | Delta ** (dB) | Spec Limit (dBuV) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | .9040 | 110.4 | 104.4 | 2.0 | 180° | 23.3 | -- | 33.3 | 94.4 | | |
| N/F | 1.807 | 48.5 | 42.5 | 1.5 | 180° | 24.5 | 5.9 | 33.1 | 39.8 | -34.6 | 74.4 |
| R | 2.710 | 41.2 | 35.2 | 1.0 | 180° | 28.2 | 6.4 | 32.7 | 37.1 | -16.9 | 54.0 |
| R | 3.614 | 40.1 | 34.1 | 1.0 | 180° | 29.6 | 8.5 | 32.1 | 40.1 | -13.9 | 54.0 |
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* CORRECTED READING = METER READING + ANTENNA FACTOR + CABLE LOSS - AMPLIFIER GAIN

** DELTA = CORRECTED READING - SPECIFICATION LIMIT

COMPATIBLE ELECTRONICS — FCC ID: CLHSKYHAWK98 — PAGE 3 of 6

# RADIATED EMISSIONS

COMPANY NAME: S. MEGGA DATE: 5-19-98

EUT: 900 MHz DIGITAL SPREAD SPECTRUM PHONE EUT S/N: N/A

EUT MODEL: SKYHAWK 90 LOCATION: ■ BREA ☐ SILVERADO ☐ AGOURA

SPECIFICATION: FCC 15.247 CLASS: NONE TEST DISTANCE: 3M LAB: D

ANTENNA: ☐ LOOP ☐ BICONICAL ■ LOG ■ HORN POLARIZATION: ☐ VERT ■ HORIZ

■ QUALIFICATION ☐ ENGINEERING ☐ MFG. AUDIT ENGINEER: BRIAN VOEGELE

NOTES: MIDDLE CHAN. — BASE UNIT

| Frequency (GHz) | Peak Reading (dBuV) | Average Reading (dBuV) | Antenna Height (meters) | Azimuth (degrees) | Antenna Factor (dB) | Cable Loss (dB) | Amplifier Gain (dB) | * Corrected Reading (dBuV) | Delta ** (dB) | Spec Limit (dBuV) |
|---|---|---|---|---|---|---|---|---|---|---|
| .9148 | 109.4 | 103.4 | 2.0 | 180° | 23.2 | — | 33.2 | 93.4 | — | — |
| 1.829 | 45.9 | 39.9 | 1.0 | 180° | 24.5 | 5.9 | 33.1 | 37.2 | -36.2 | 73.4 |
| 2.743 | 40.2 | 34.2 | 1.0 | 90° | 28.2 | 6.4 | 32.7 | 36.1 | -17.9 | 54.0 |
| 3.657 | 40.0 | 34.0 | 1.0 | 180° | 29.6 | 8.5 | 32.1 | 40.0 | -14.0 | 54.0 |
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* CORRECTED READING = METER READING + ANTENNA FACTOR + CABLE LOSS - AMPLIFIER GAIN

** DELTA = CORRECTED READING - SPECIFICATION LIMIT

# RADIATED EMISSIONS

COMPANY NAME: S. MEGA DATE: 5-19-98

EUT: 900 MHZ DIGITAL SPREAD SPECTRUM PHONE EUT S/N: N/A

EUT MODEL: SKYHAWK 98 LOCATION: ☒ BREA ☐ SILVERADO ☐ AGOURA

SPECIFICATION: FCC 15.247 CLASS: NONE TEST DISTANCE: 3M LAB: D

ANTENNA: ☐ LOOP ☐ BICONICAL ☒ LOG ☒ HORN POLARIZATION: ☒ VERT ☐ HORIZ

☒ QUALIFICATION ☐ ENGINEERING ☐ MFG. AUDIT ENGINEER: BRIAN VEGELE

NOTES: MIDDLE CHAN. - BASE UNIT

| | Frequency (GHz) | Peak Reading (dBuV) | Average Reading (dBuV) | Antenna Height (meters) | Azimuth (degrees) | Antenna Factor (dB) | Cable Loss (dB) | Amplifier Gain (dB) | * Corrected Reading (dBuV) | Delta ** (dB) | Spec Limit (dBuV) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | .9148 | 113.9 | 107.9 | 1.5 | 180° | 23.2 | — | 33.2 | 97.9 | — | — |
| MP | 1.828 | 48.1 | 42.1 | 1.0 | 180° | 24.5 | 5.9 | 33.1 | 39.4 | -38.5 | 77.9 |
| P | 2.743 | 42.3 | 36.3 | 1.0 | 180° | 28.2 | 6.4 | 32.7 | 38.2 | -15.8 | 54.0 |
| P | 3.657 | 44.0 | 38.0 | 1.0 | 180° | 29.6 | 8.5 | 32.1 | 44.0 | -10.0 | 54.0 |
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* CORRECTED READING = METER READING + ANTENNA FACTOR + CABLE LOSS - AMPLIFIER GAIN

** DELTA = CORRECTED READING - SPECIFICATION LIMIT

COMPATIBLE ELECTRONICS — FCC ID: CLHSKYHAWK98 PAGE 5 of 6

# RADIATED EMISSIONS

COMPANY NAME: S. MEGA DATE: 5-19-98

EUT: 900 MHZ DIGITAL SPREAD SPECTRUM PHONE EUT S/N: N/A

EUT MODEL: SKYHAWK 98 LOCATION: ☒ BREA ☐ SILVERADO ☐ AGOURA

SPECIFICATION: FCC 15.247 CLASS: NXE TEST DISTANCE: 3M LAB: D

ANTENNA: ☐ LOOP ☐ BICONICAL ☒ LOG ☒ HORN POLARIZATION: ☐ VERT ☒ HORIZ

☒ QUALIFICATION ☐ ENGINEERING ☐ MFG. AUDIT ENGINEER: BRIAN VOGELEY

NOTES: HIGH CHAN. — BASE UNIT

| | Frequency (GHz) | Peak Reading (dBuV) | Average Reading (dBuV) | Antenna Height (meters) | Azimuth (degrees) | Antenna Factor (dB) | Cable Loss (dB) | Amplifier Gain (dB) | * Corrected Reading (dBuV) | Delta ** (dB) | Spec Limit (dBuV) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | .9268 | 110.7 | 104.7 | 1.5 | 180° | 23.2 | — | 33.1 | 94.8 | — | — |
| N/R | 1.852 | 45.4 | 39.4 | 1.5 | 180° | 24.5 | 5.7 | 32.9 | 36.7 | -38.1 | 74.8 |
| R | 2.779 | 40.1 | 34.1 | 1.5 | 270° | 29.7 | 7.3 | 32.4 | 38.7 | -15.3 | 54.0 |
| R | 3.705 | 40.0 | 34.0 | 1.5 | 90° | 29.6 | 8.5 | 32.1 | 40.0 | -14.0 | 54.0 |
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* CORRECTED READING = METER READING + ANTENNA FACTOR + CABLE LOSS - AMPLIFIER GAIN

** DELTA = CORRECTED READING - SPECIFICATION LIMIT

COMPATIBLE ELECTRONICS — FCC ID: CLHSKYHAWK98 

# *RADIATED EMISSIONS*

**COMPANY NAME:** S. MEGGA **DATE:** 5-19-98

**EUT:** 900 MHZ DIGITAL SPREAD SPECTRUM PHONE **EUT S/N:** N/A

**EUT MODEL:** SKYHAWK 98 **LOCATION:** ■ BREA ☐ SILVERADO ☐ AGOURA

**SPECIFICATION:** FCC 15-247 **CLASS:** NONE **TEST DISTANCE:** 3 M **LAB:** D

**ANTENNA:** ☐ LOOP ☐ BICONICAL ■ LOG ■ HORN **POLARIZATION:** ■ VERT ☐ HORIZ

■ QUALIFICATION ☐ ENGINEERING ☐ MFG. AUDIT **ENGINEER:** BRIAN VOEGELE

NOTES: HIGH CHAN. — BASE UNIT

| | Frequency (GHz) | Peak Reading (dBuV) | Average Reading (dBuV) | Antenna Height (meters) | Azimuth (degrees) | Antenna Factor (dB) | Cable Loss (dB) | Amplifier Gain (dB) | * Corrected Reading (dBuV) | Delta ** (dB) | Spec Limit (dBuV) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | .9268 | 117.5 | 106.5 | 2.0 | 180° | 23.2 | — | 33.1 | 96.6 | — | — |
| NR | 1.852 | 49.8 | 43.8 | 1.5 | 180° | 24.5 | 5.7 | 32.9 | 41.1 | -35.5 | 76.6 |
| R | 2.778 | 40.9 | 34.9 | 2.5 | 0° | 29.7 | 7.3 | 32.4 | 39.5 | -14.5 | 54.0 |
| R | 3.705 | 41.1 | 35.1 | 2.5 | 0° | 29.6 | 8.5 | 32.1 | 41.1 | -12.9 | 54.0 |
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* CORRECTED READING = METER READING + ANTENNA FACTOR + CABLE LOSS - AMPLIFIER GAIN

** DELTA = CORRECTED READING - SPECIFICATION LIMIT

## 14.2 6 dB Bandwidth for Direct Sequence Systems

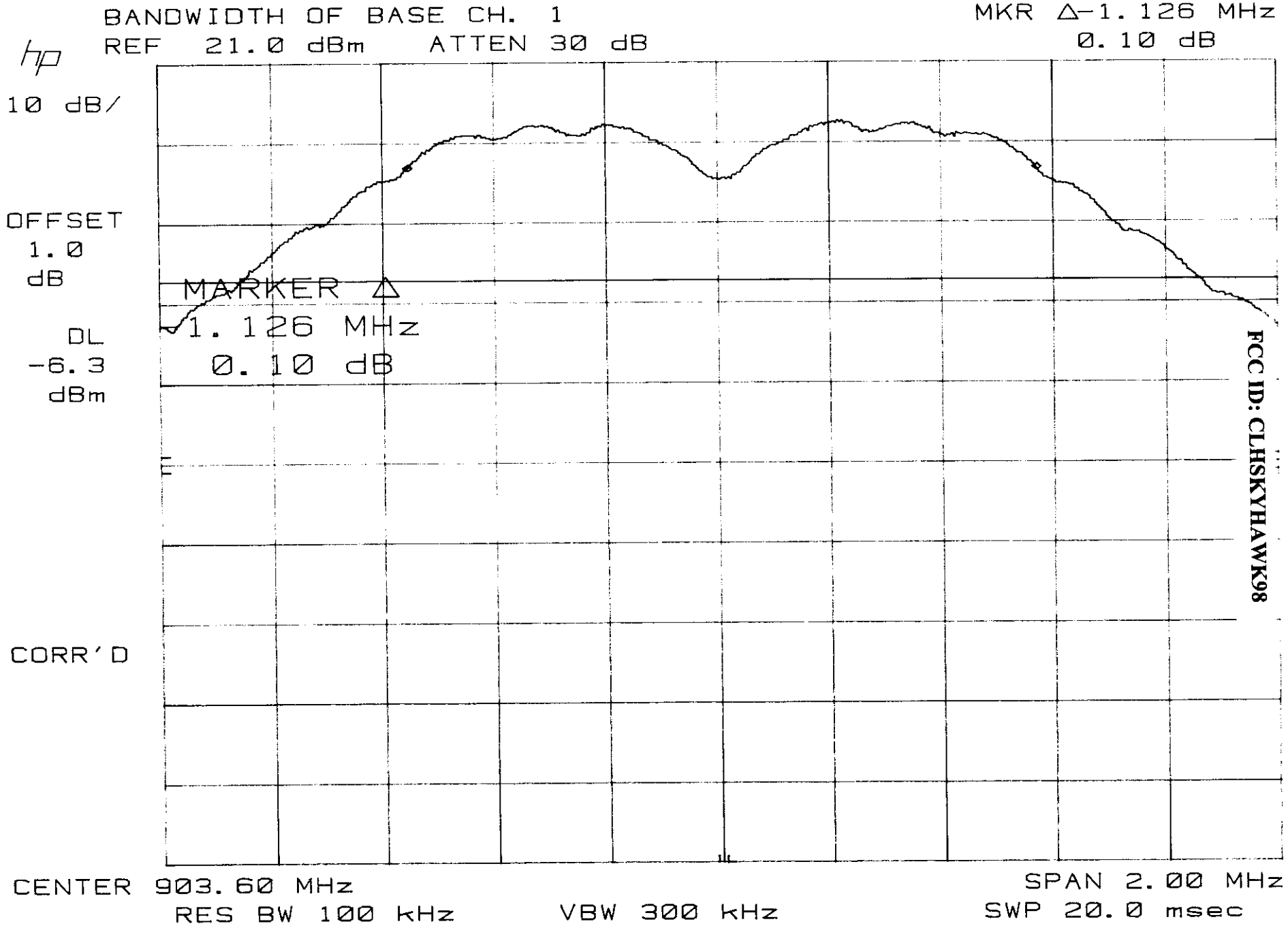
The 6 dB Bandwidth was taken for both the base and handset using the spectrum analyzer. The bandwidth was measured using a direct connection from the RF out on the RF board for both the base and handset into the input of the analyzer. The resolution bandwidth was 100 kHz, and the video bandwidth 300 kHz.

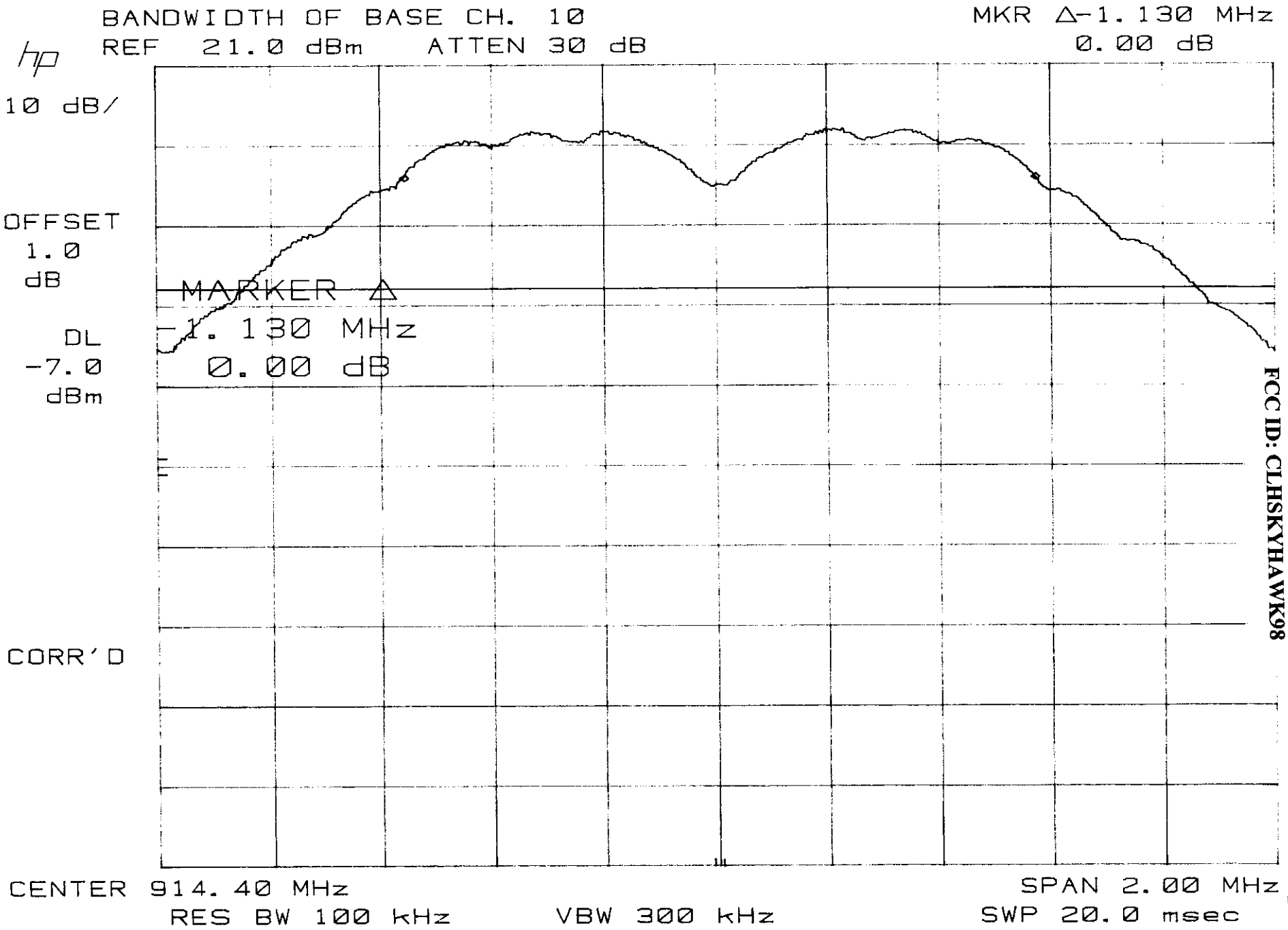
Test Results:

The EUT complies with the relevant requirements of FCC Title 47, Part 15, Subpart C section 15.209 (a)(2). The bandwidth is at least 500 kHz.

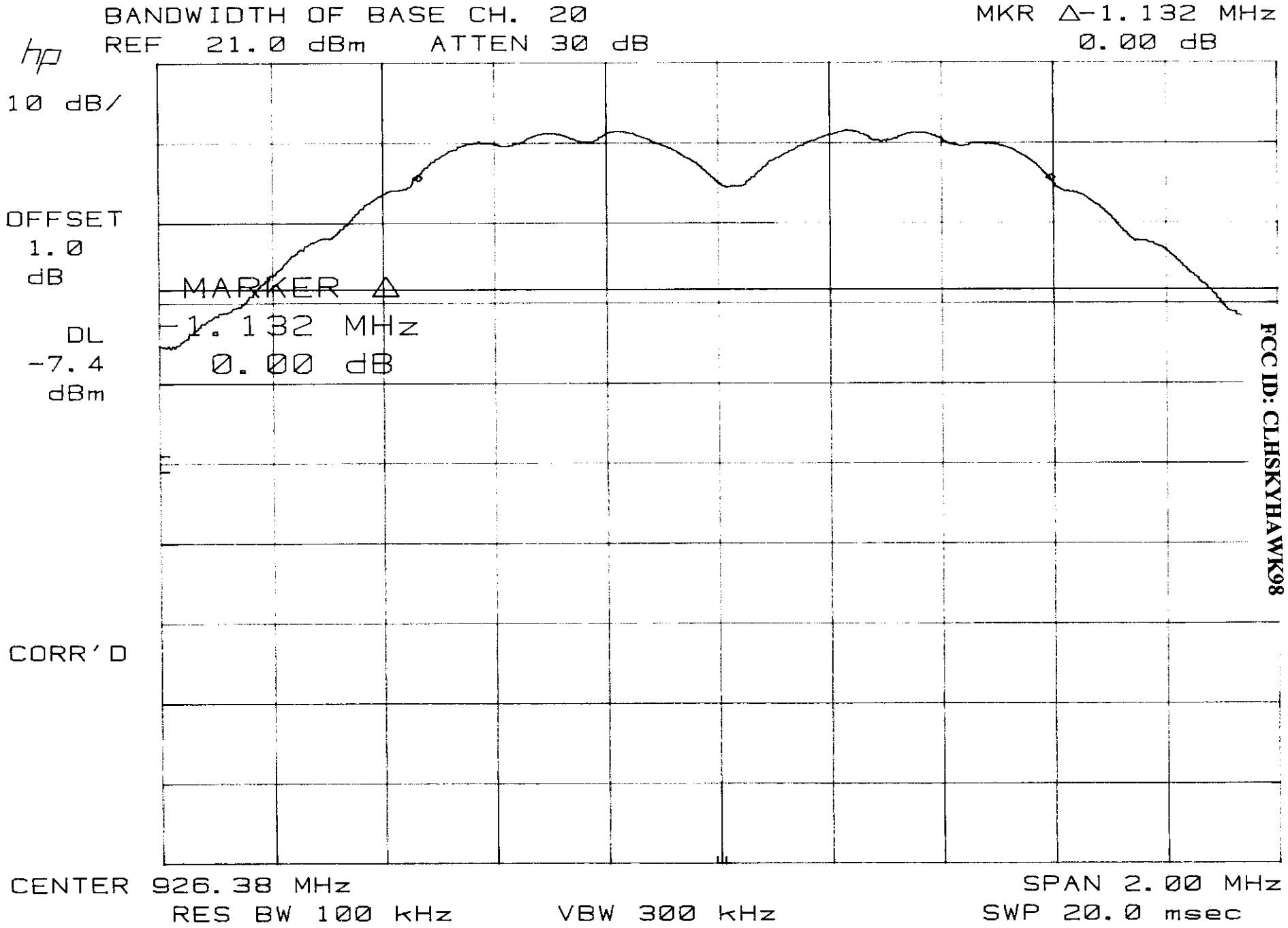
**SECTION 14.2.1**

# *6 dB BANDWIDTH FOR THE BASE AND HANDSET DATA SHEETS*


BANDWIDTH OF BASE CH. 1
MKR Δ-1.126 MHz
REF 21.0 dBm ATTEN 30 dB
0.10 dB
hp
10 dB/
OFFSET
1.0
dB
MARKER Δ
1.126 MHz
0.10 dB
DL
-6.3
dBm
FCC ID: CLHSKYHAWK98
CORR'D
CENTER 903.60 MHz
SPAN 2.00 MHz
RES BW 100 kHz
VBW 300 kHz
SWP 20.0 msec

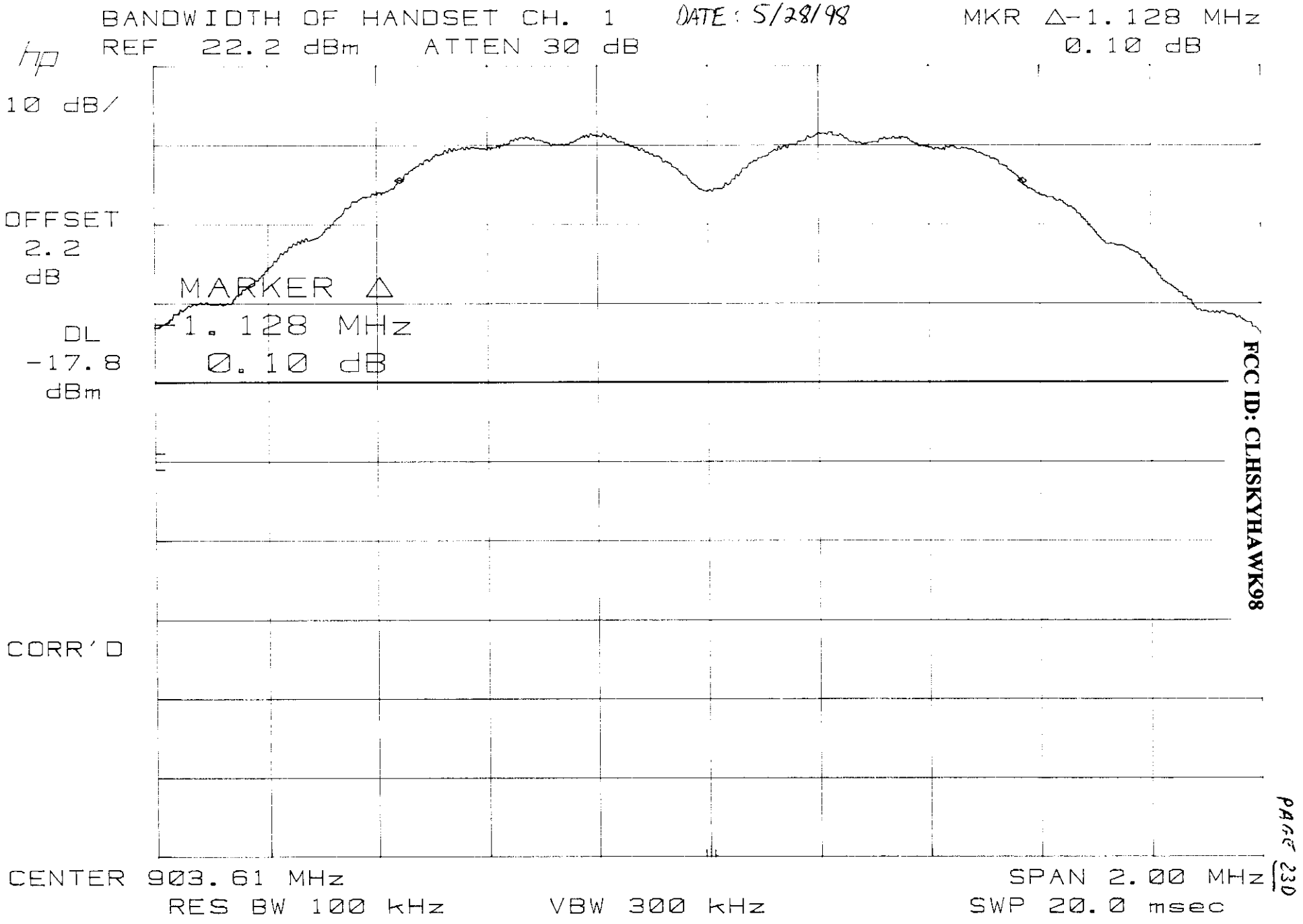



FCC ID: CLHSKYHAWK98



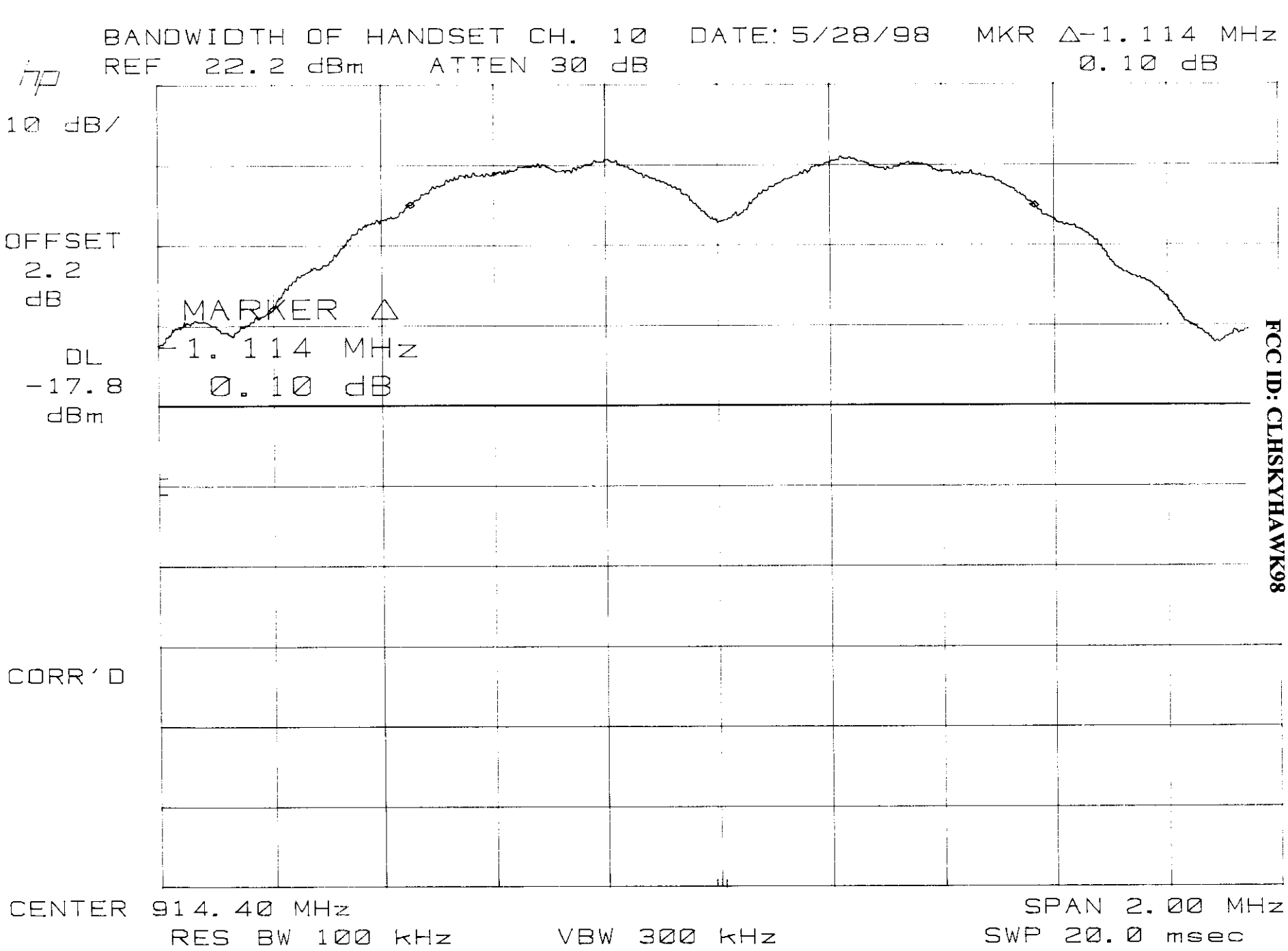

FCC ID: CLHSKYHAWK98

PAGE 23C



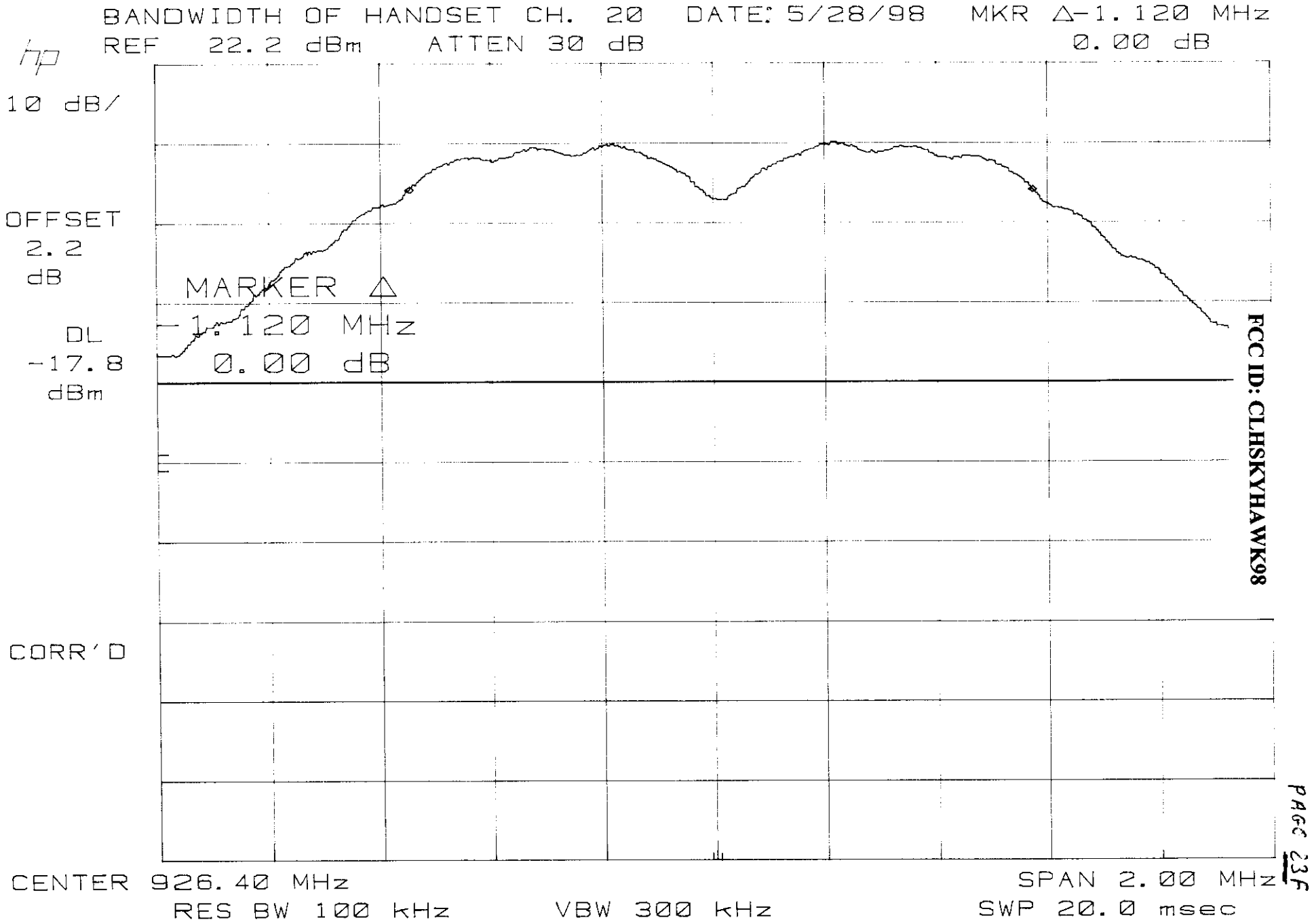

FCC ID: CLHSKYHAWK98

PAGE 23D




FCC ID: CLHSKYHAWK98

PAGE 23C




FCC ID: CLHSKYHAWK98

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## 14.3 Peak Output Power

The peak output power was taken for both the base and handset using the spectrum analyzer. The peak output power was measured using a direct connection from the RF out on the RF board for both the base and handset into the input of the analyzer. The resolution bandwidth was 3 MHz, and the video bandwidth 1 MHz.

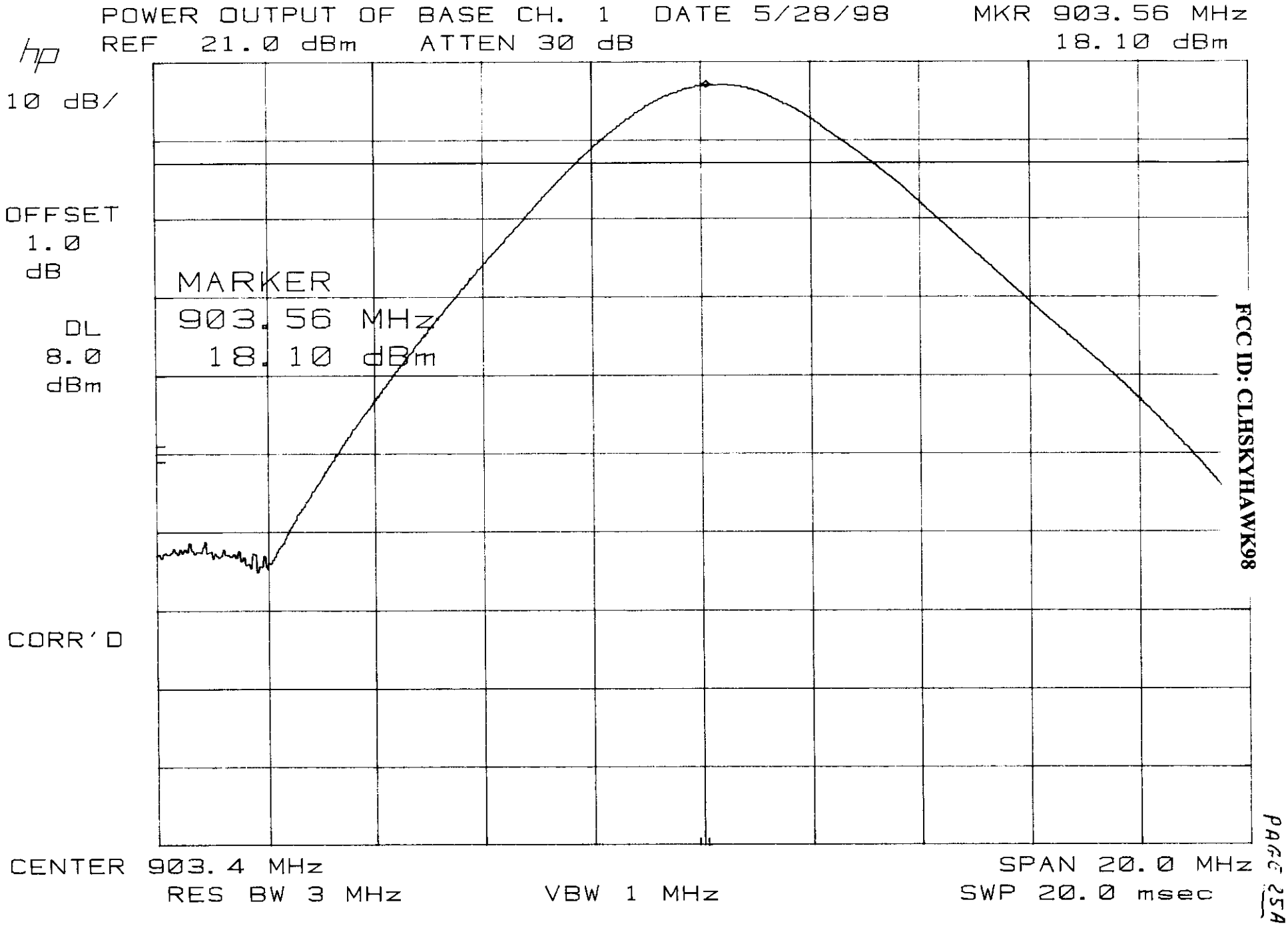
Test Results:

The EUT complies with the relevant requirements of FCC Title 47, Part 15, Subpart C section 15.209 (b)(1). The maximum peak output power is less than 1 watt.

**SECTION 14.3.1**

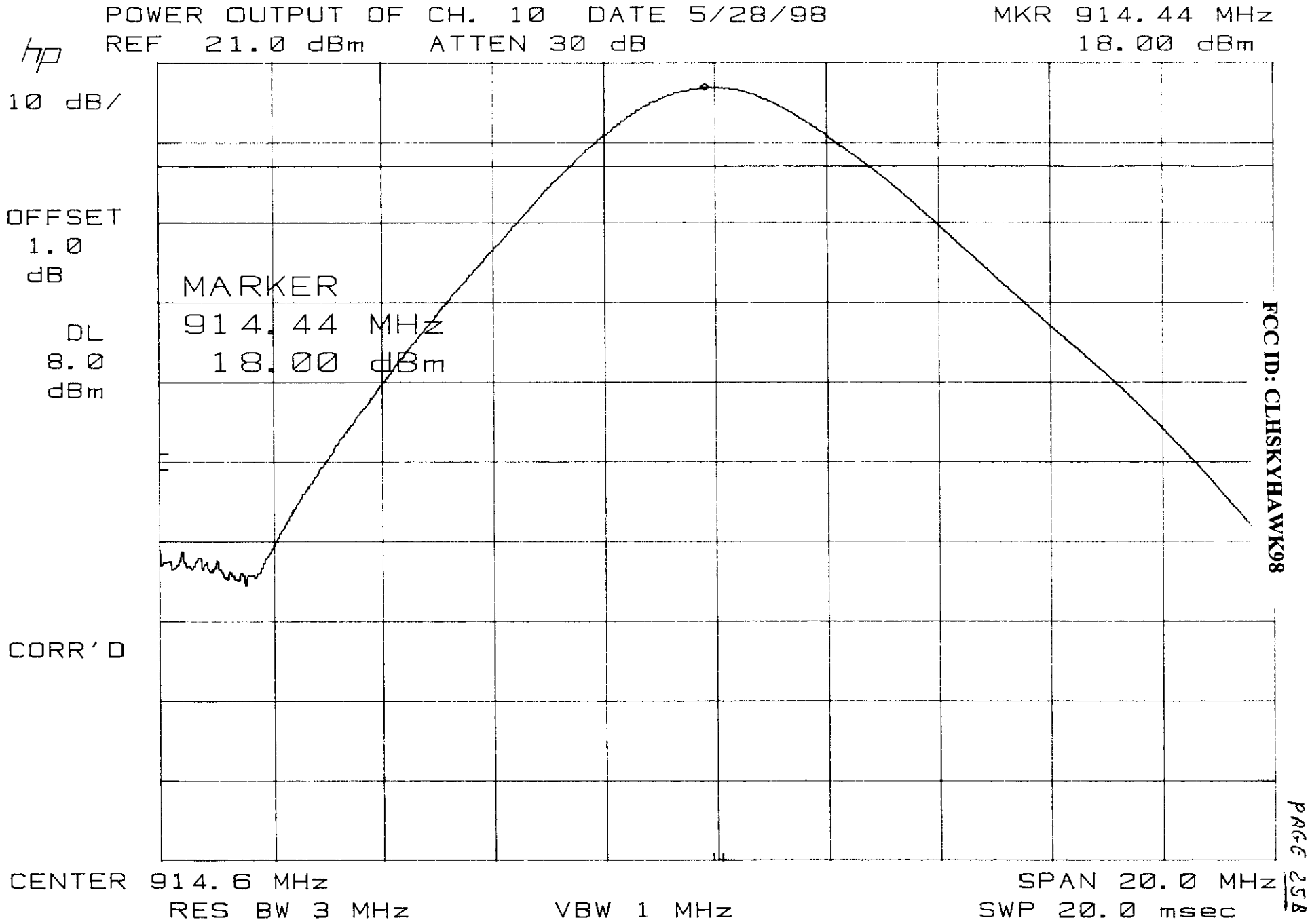
# *PEAK OUTPUT POWER FOR THE BASE AND HANDSET DATA SHEETS*

114 OLINDA DRIVE, BREA, CALIFORNIA 92823 PHONE: (714) 579-0500 FAX: (714) 579-1850



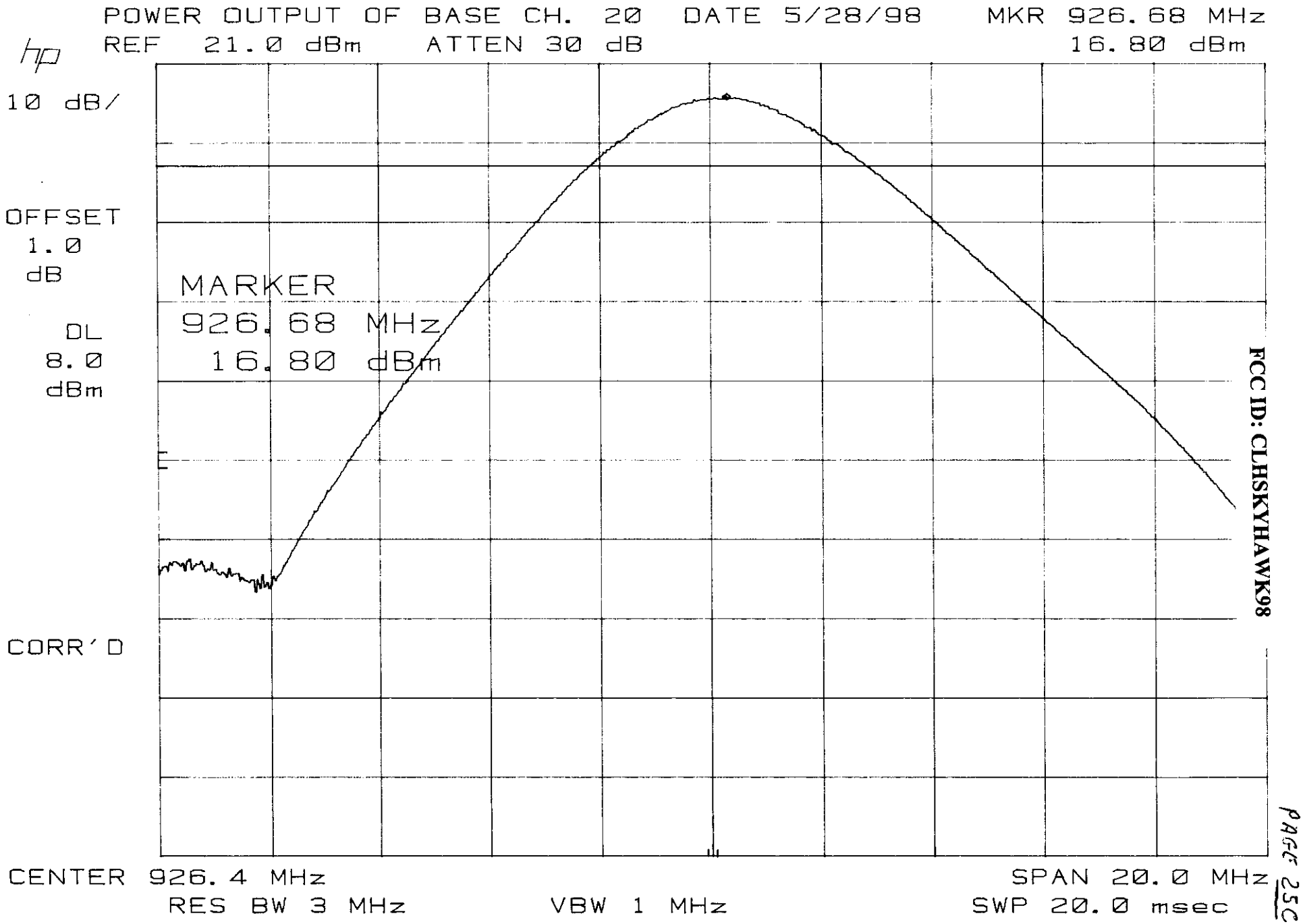

FCC ID: CLHSKYHAWK98

PAGE 25A



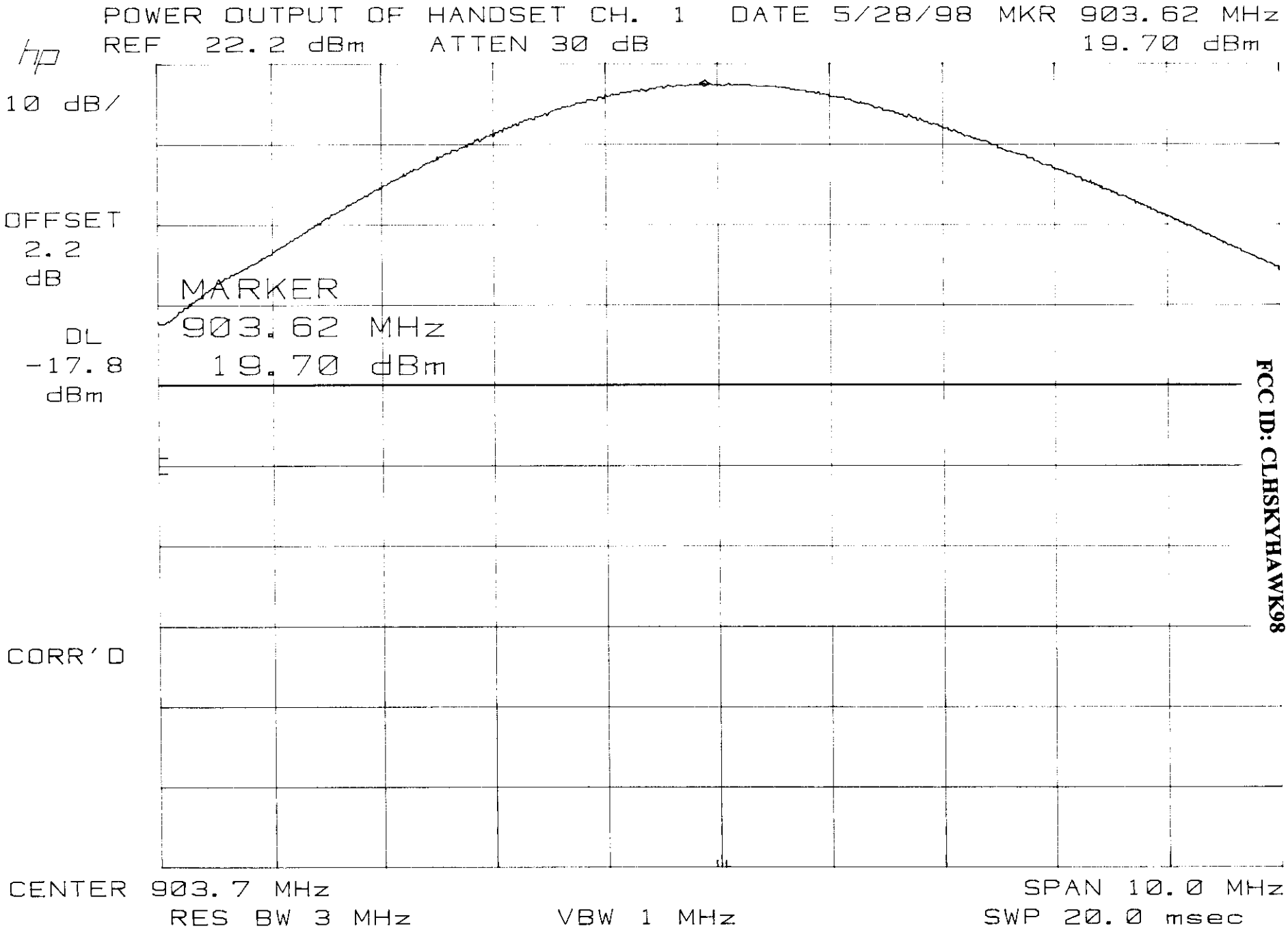

FCC ID: CLHSKYHAWK98

PAGE 25B



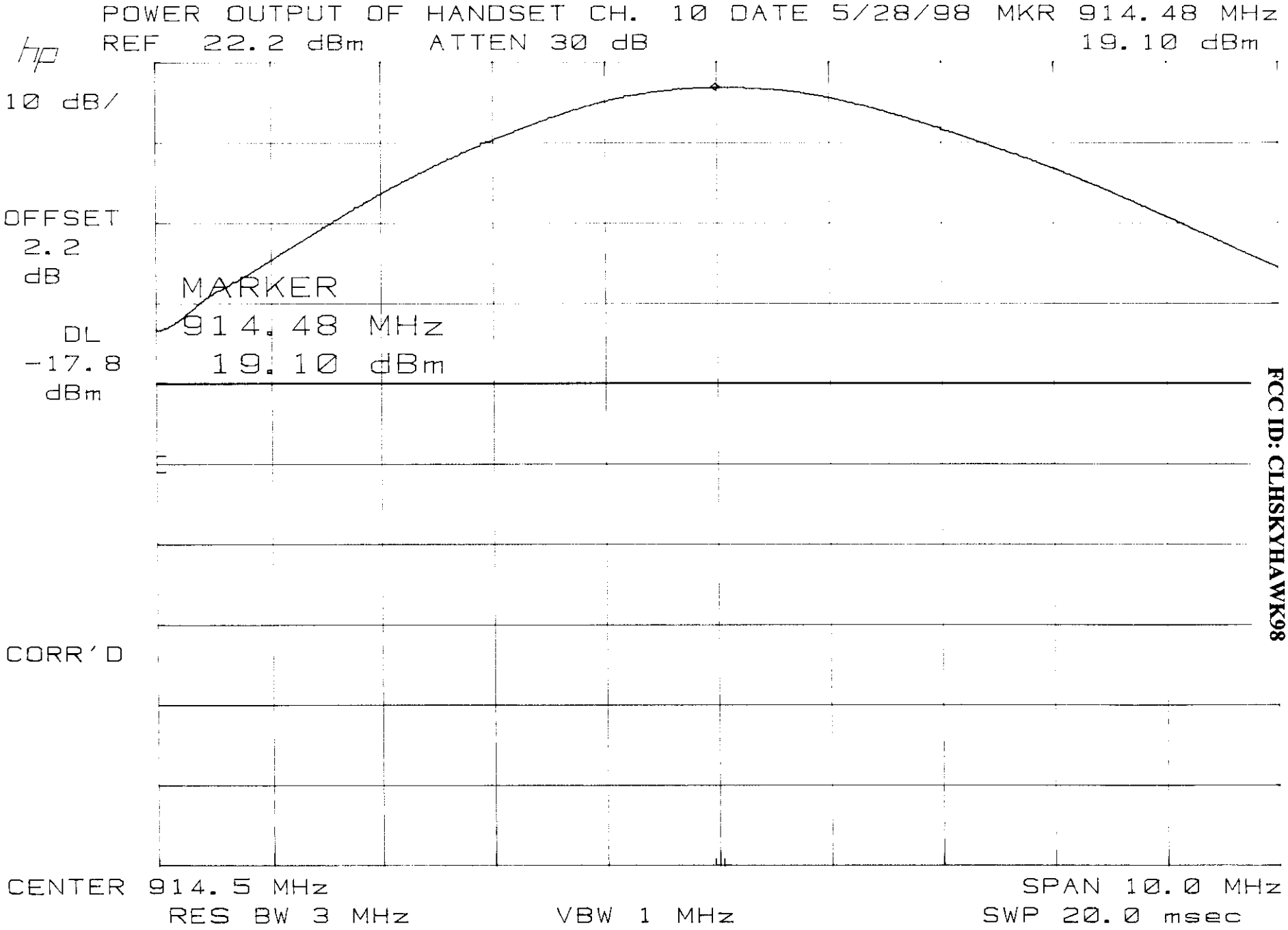

FCC ID: CLHSKYHAWK98

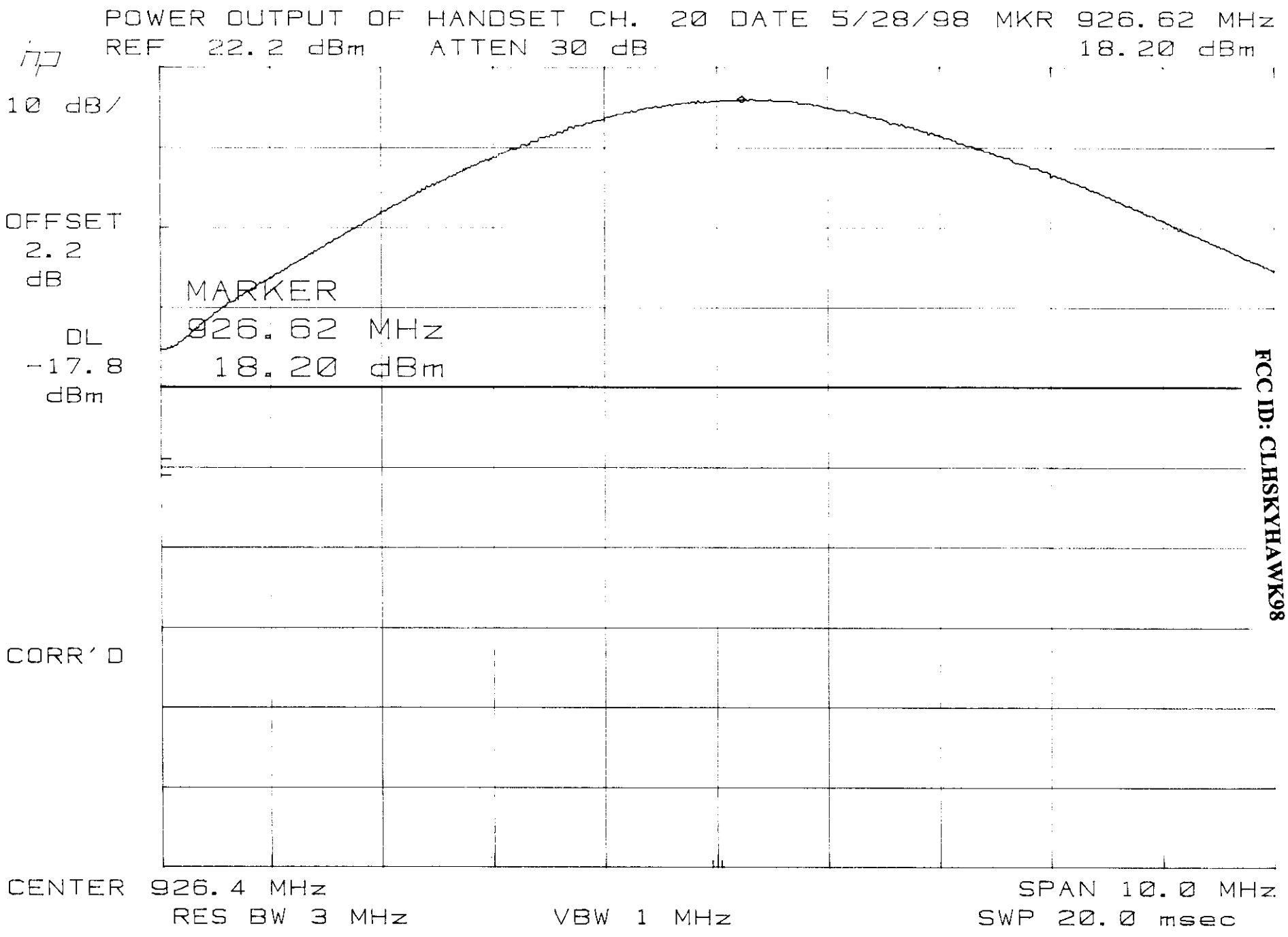
PAGE 25C




FCC ID: CLHSKYHAWK98

PAGE 25D






FCC ID: CLHSKYHAWK98

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## 14.4 Spectral Density Output

The spectral density output was taken for both the base and handset using the spectrum analyzer. The spectral density output power was measured using a direct connection from the RF out on the RF board for both the base and handset into the input of the analyzer. The resolution bandwidth was 3 kHz, and the video bandwidth 10 kHz. The highest 500 kHz of the signal was used as the frequency span with the sweep rate being 1 second for every 3 kHz of span.

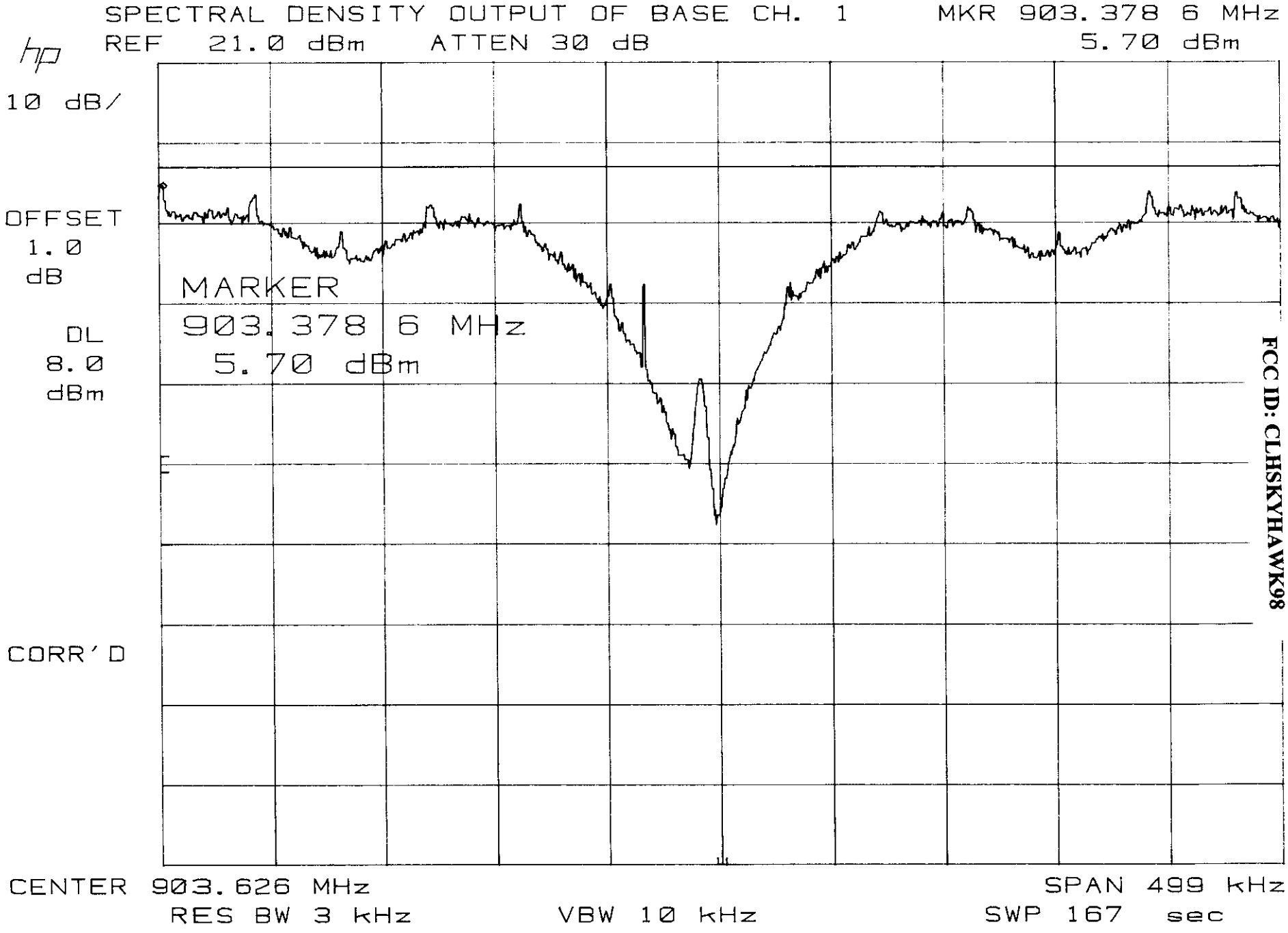
Test Results:

The EUT complies with the relevant requirements of FCC Title 47, Part 15, Subpart C section 15.209 (d). The spectral density output does not exceed 8 dBm in any 3 KHz band.

**SECTION 14.4.1**

# *SPECTRAL DENSITY OUTPUT FOR THE BASE AND HANDSET DATA SHEETS*

114 OLINDA DRIVE, BREA, CALIFORNIA 92823 PHONE: (714) 579-0500 FAX: (714) 579-1850




FCC ID: CLHSKYHAWK98

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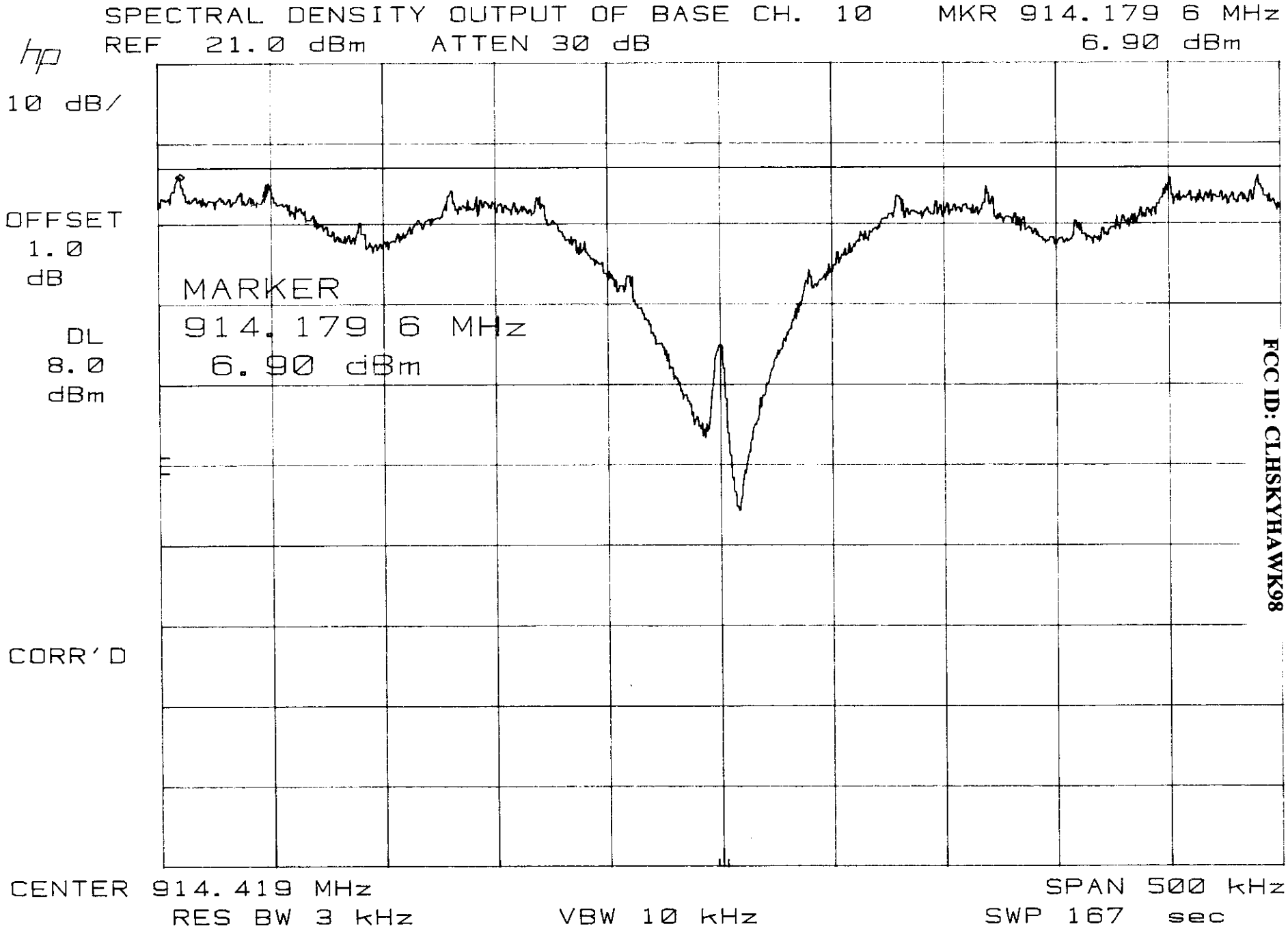


FCC ID: CLHSKYHAWK98

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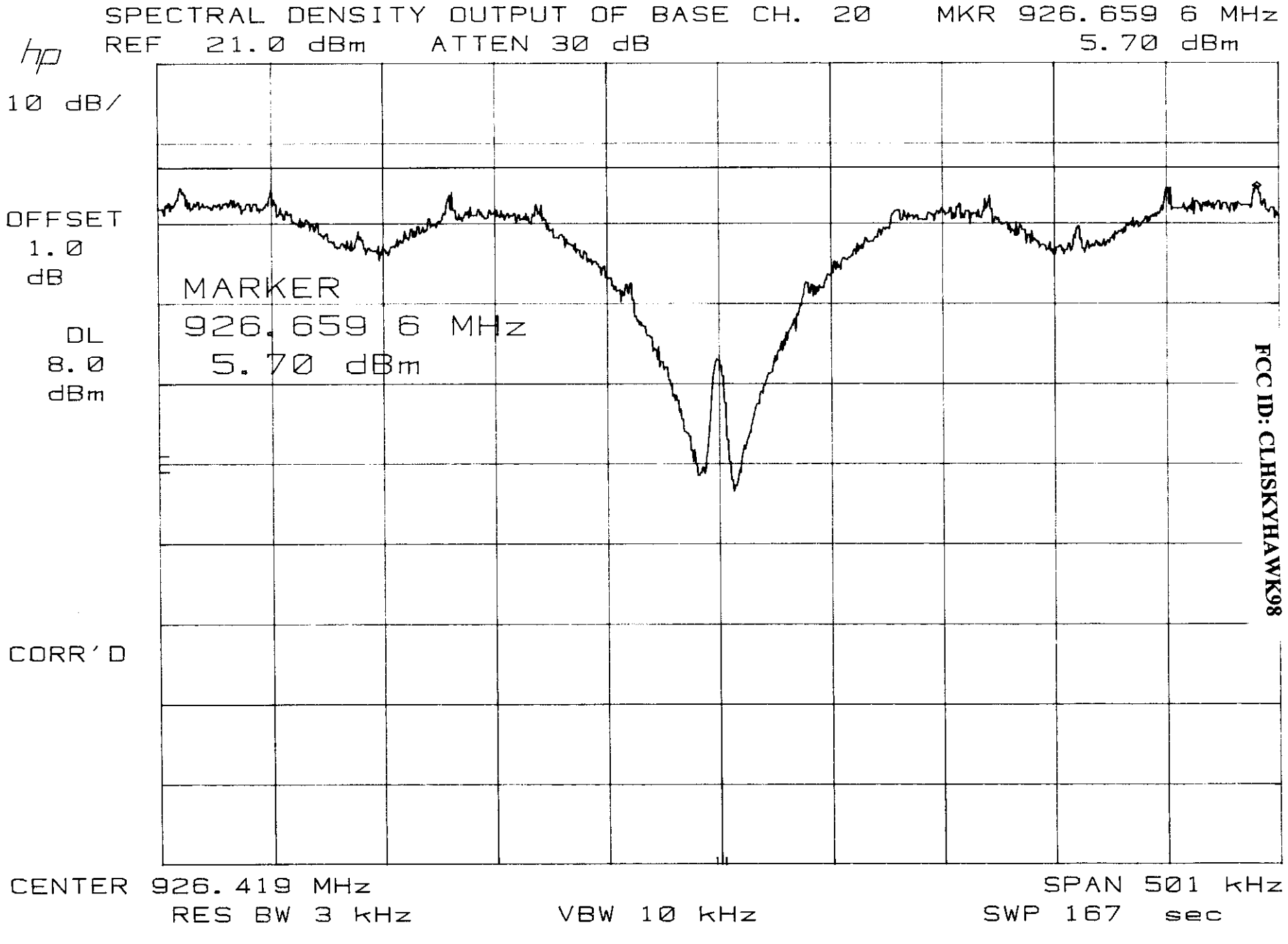
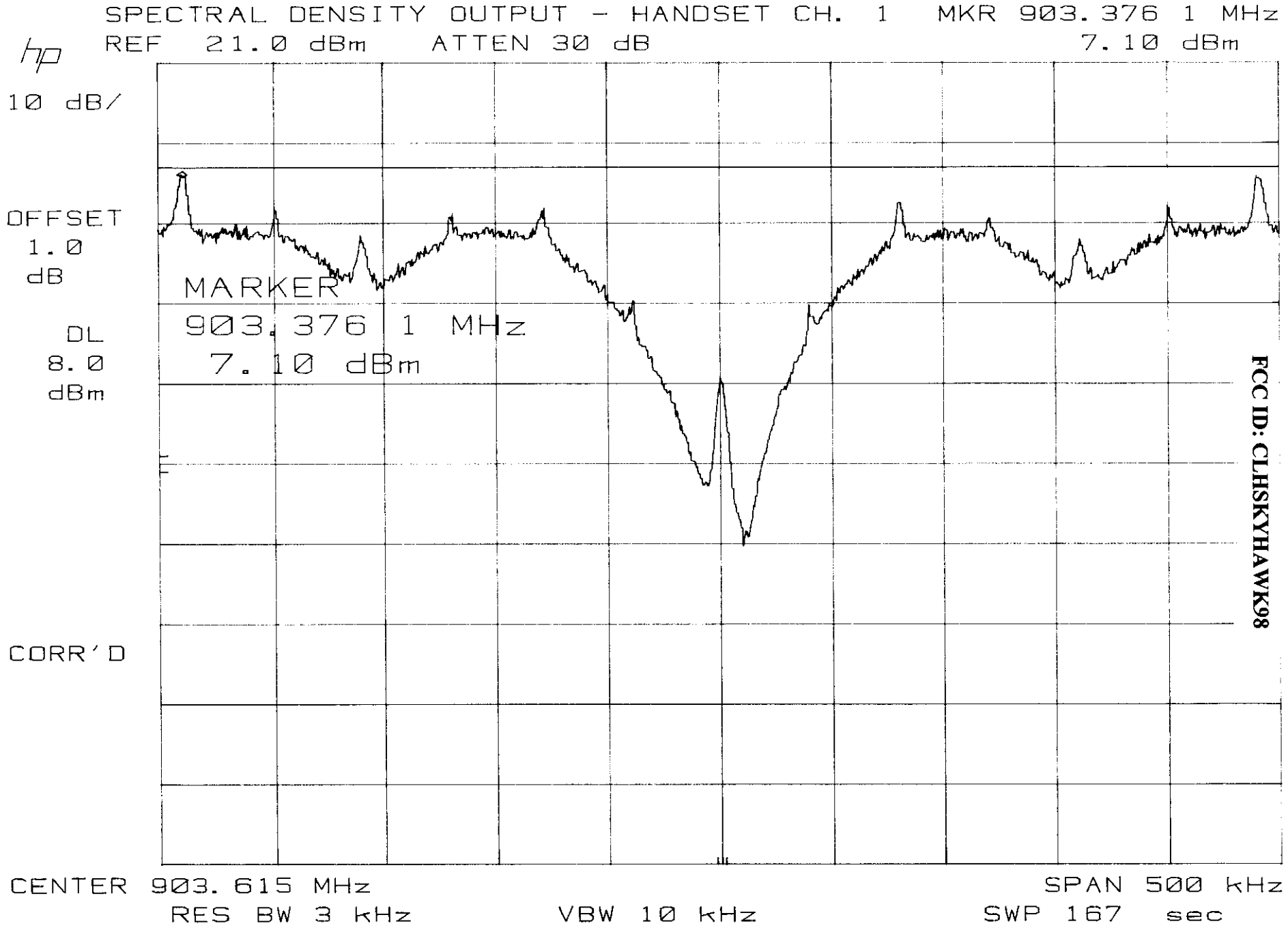


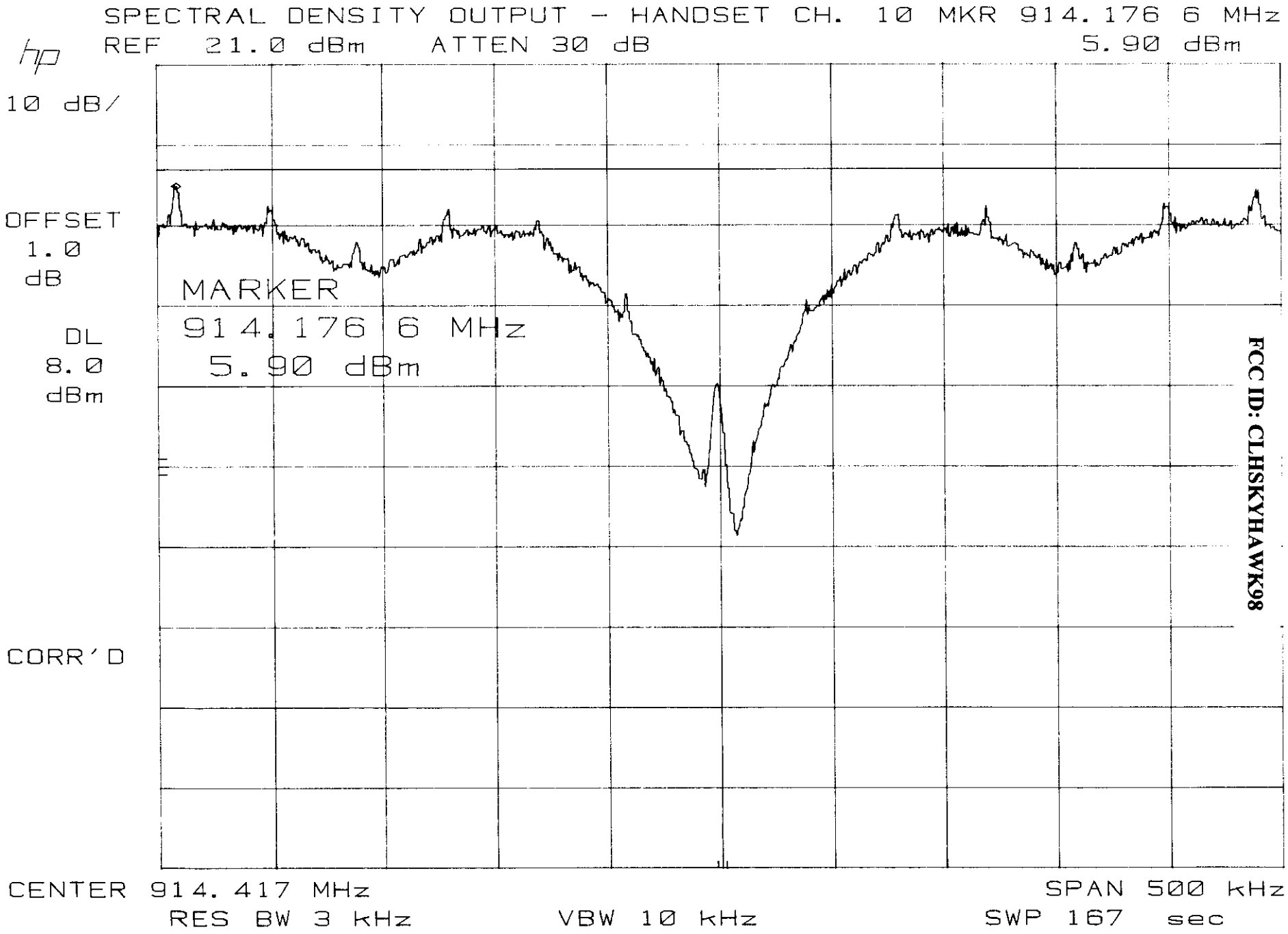

FCC ID: CLHSKYHAWK98

PAGE 27C




FCC ID: CLHSKYHAWK98

PAGE 23D




FCC ID: CLHSKYHAWK98

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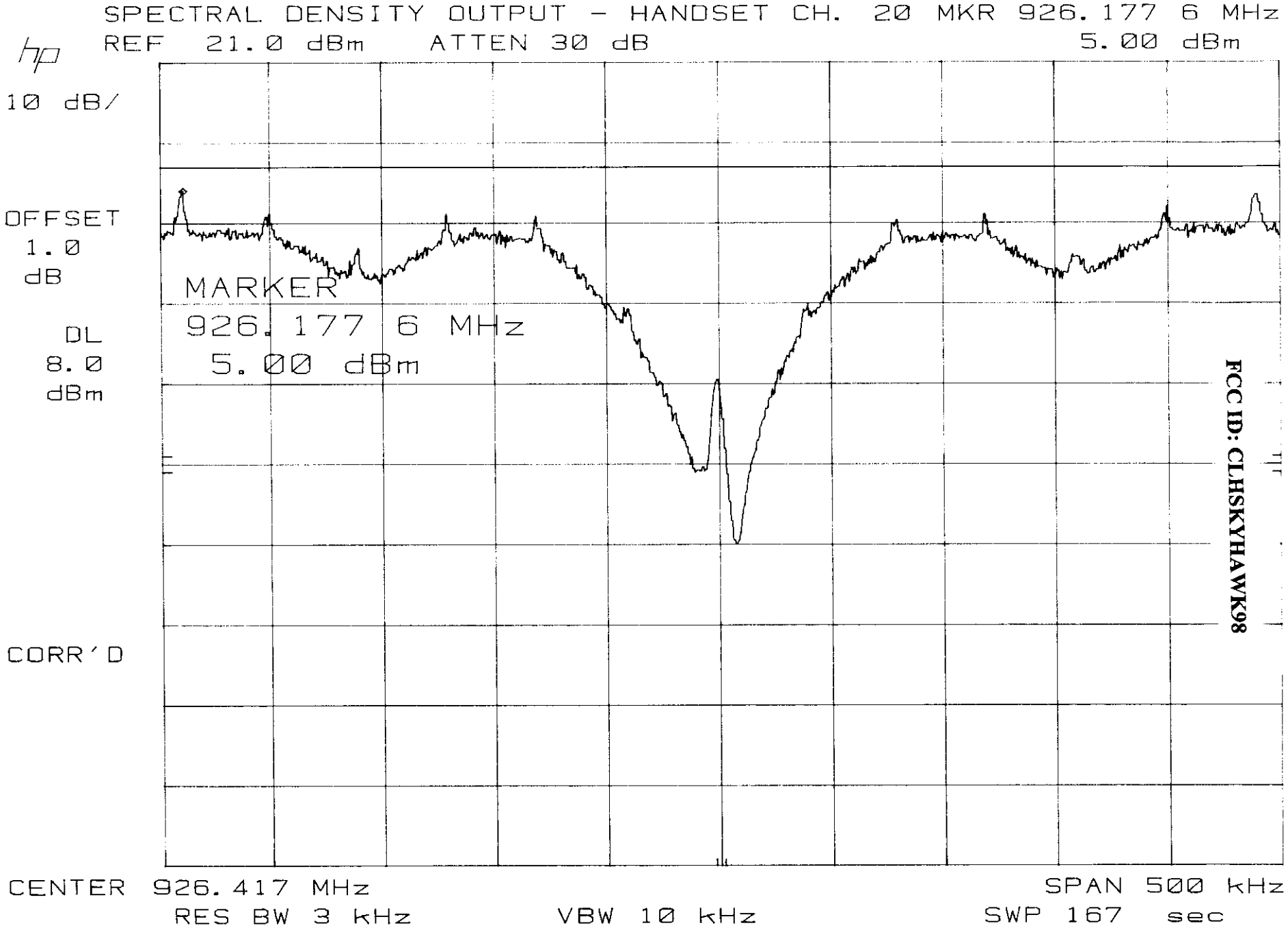

SPECTRAL DENSITY OUTPUT - HANDSET CH. 20 MKR 926.177 6 MHz
REF 21.0 dBm ATTEN 30 dB 5.00 dBm
10 dB/
OFFSET
1.0
dB
MARKER
926.177 6 MHz
5.00 dBm
DL
8.0
dBm
CORR'D
CENTER 926.417 MHz
SPAN 500 kHz
RES BW 3 kHz
VBW 10 kHz
SWP 167 sec
FCC ID: CLHSKYHAWK98

## 14.5 RF Antenna Conducted Test

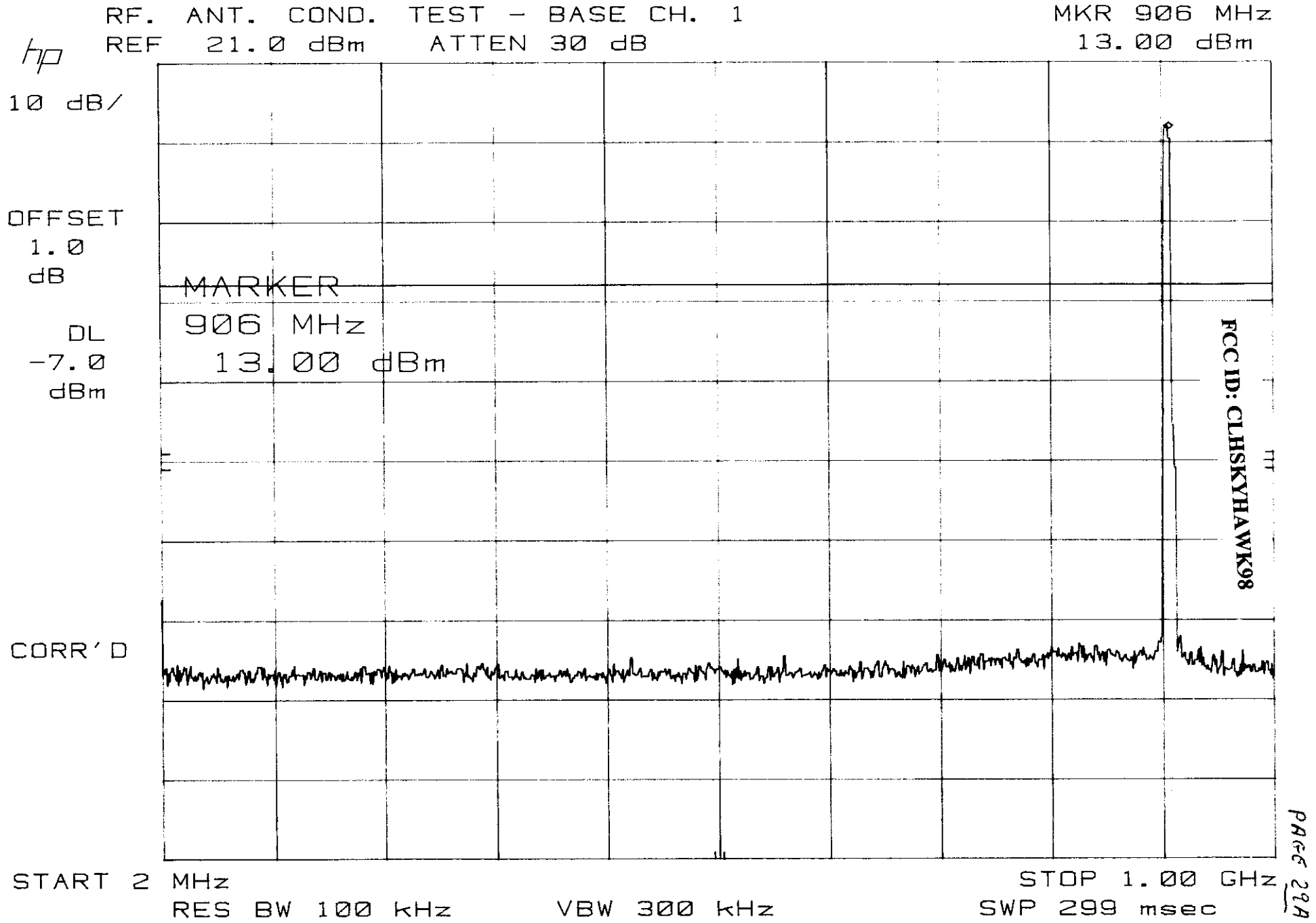
The RF antenna conducted test was taken for both the base and handset using the spectrum analyzer. The RF antenna conducted test was measured using a direct connection from the RF out on the RF board for both the base and handset into the input of the analyzer. The resolution bandwidth was 100 kHz, and the video bandwidth 300 kHz. The spans were wide enough to include all the harmonics and emissions that were produced by the intentional radiator.

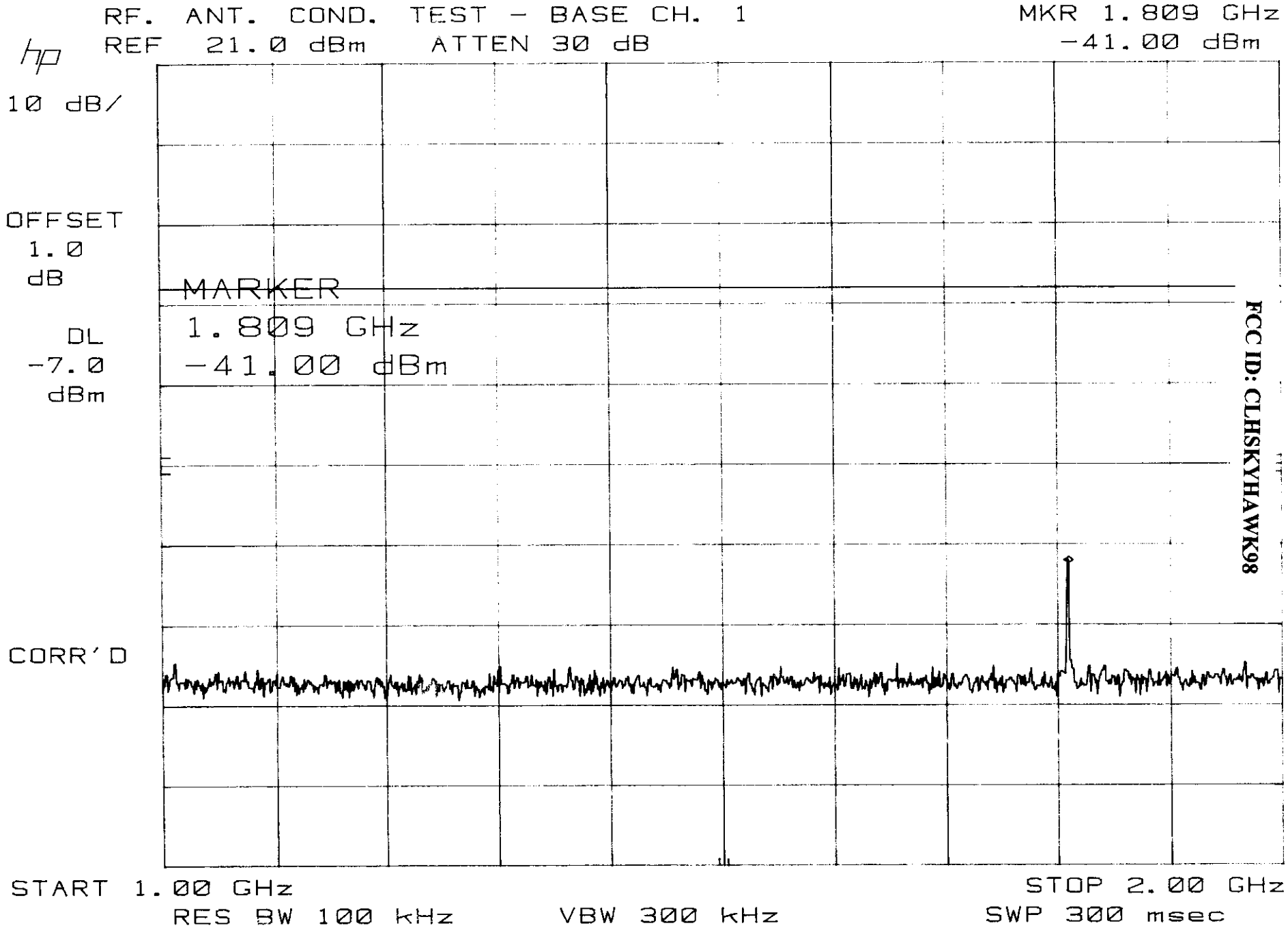
Test Results:

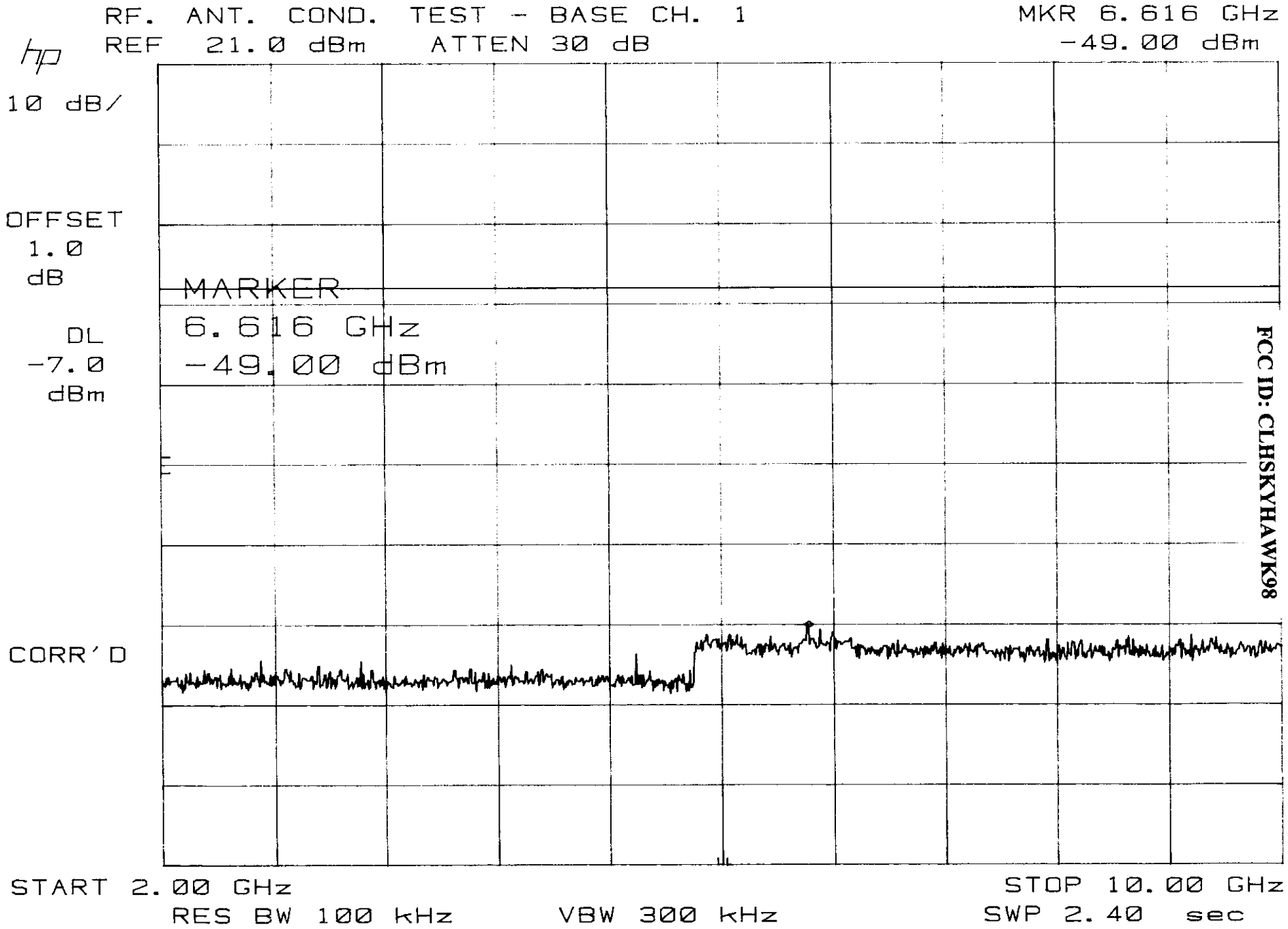
The EUT complies with the relevant requirements of FCC Title 47, Part 15, Subpart C section 15.209 (c). The RF power that is produced by the intentional radiator is at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of desired power.

**SECTION 14.5.1**

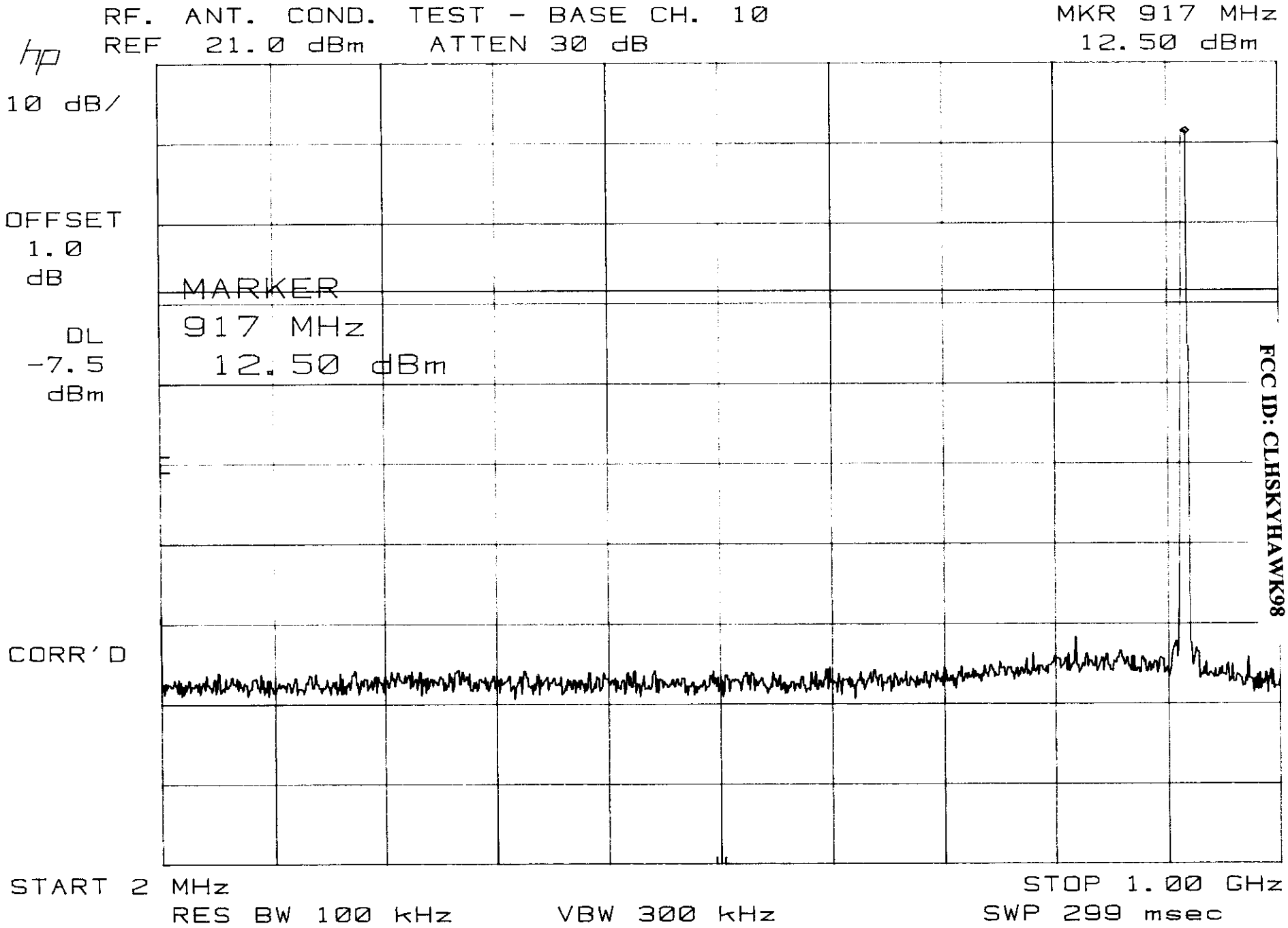
# *RF ANTENNA CONDUCTED FOR THE BASE AND HANDSET DATA SHEETS*


RF. ANT. COND. TEST – BASE CH. 1
REF 21.0 dBm
ATTEN 30 dB
MKR 906 MHz
13.00 dBm
10 dB/
OFFSET
1.0
dB
MARKER
906 MHz
13.00 dBm
DL
-7.0
dBm
CORR'D
FCC ID: CLHSKYHAWK98
START 2 MHz
RES BW 100 kHz
VBW 300 kHz
STOP 1.00 GHz
SWP 299 msec


RF. ANT. COND. TEST - BASE CH. 1
REF 21.0 dBm
ATTEN 30 dB
MKR 1.809 GHz
-41.00 dBm
10 dB/
OFFSET
1.0
dB
MARKER
1.809 GHz
-41.00 dBm
DL
-7.0
dBm
CORR'D
FCC ID: CLHSKYHAWK98
START 1.00 GHz
STOP 2.00 GHz
RES BW 100 kHz
VBW 300 kHz
SWP 300 msec




FCC ID: CLHSKYHAWK98




FCC ID: CLHSKYHAWK98

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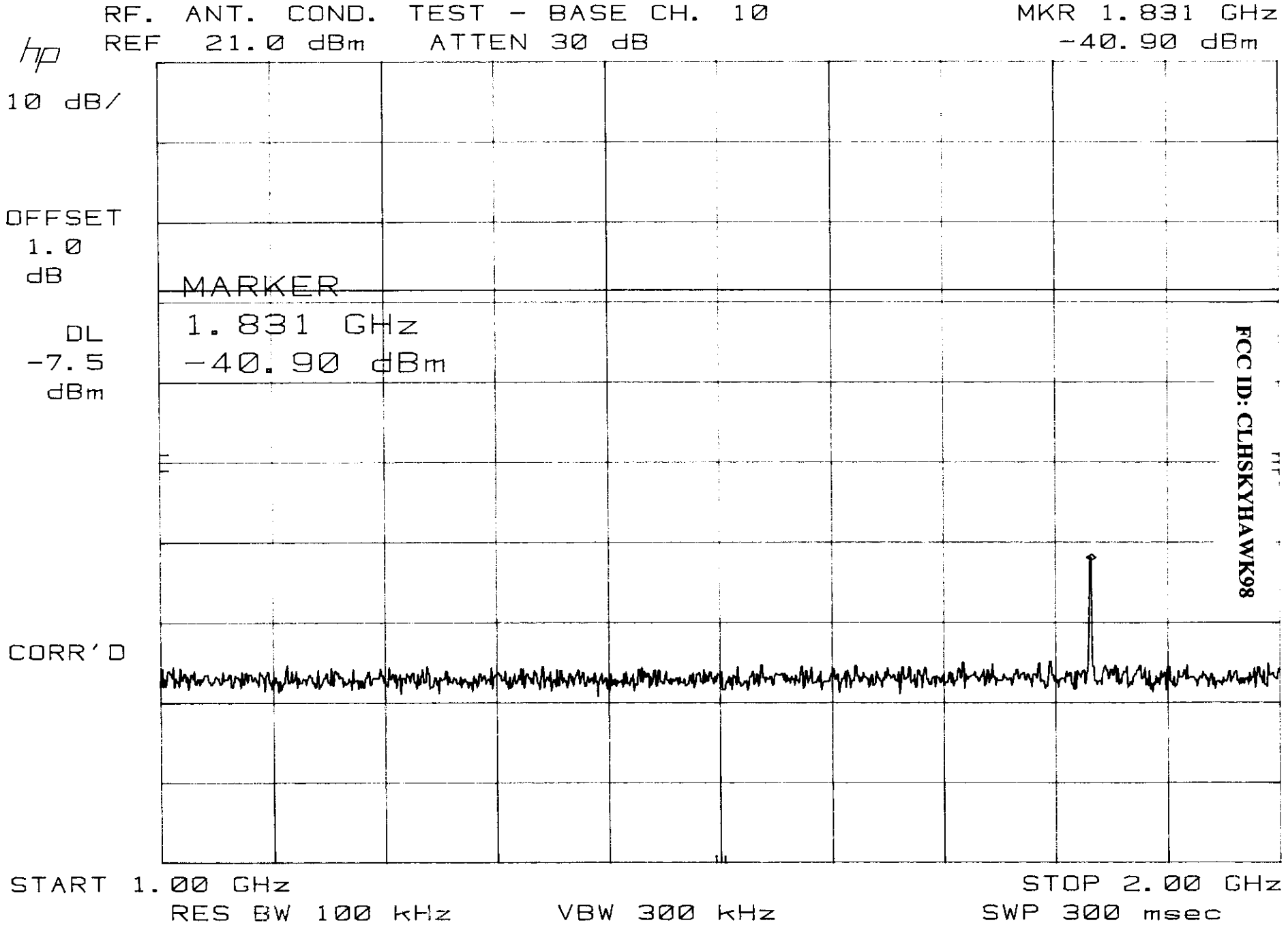
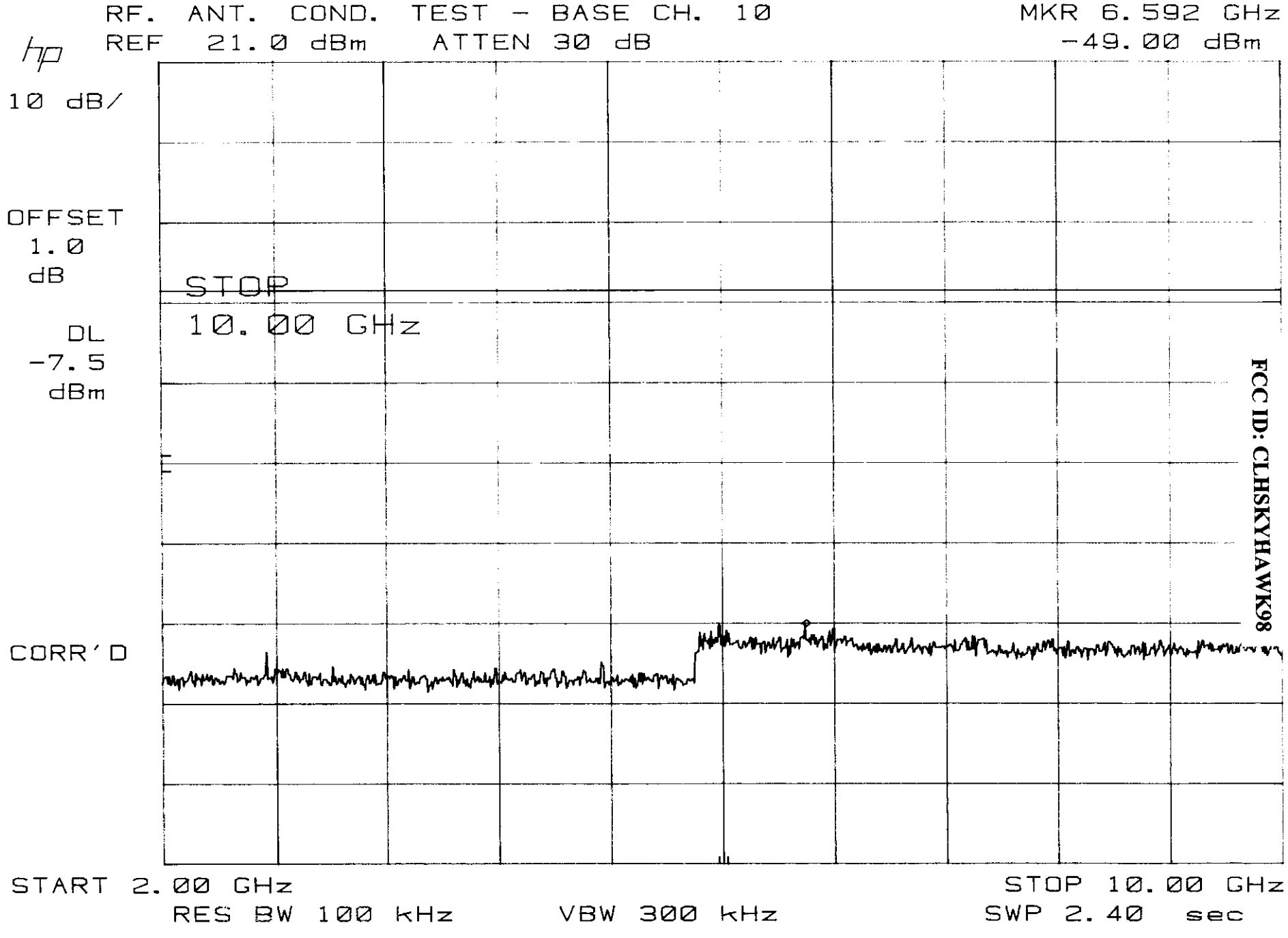

RF. ANT. COND. TEST - BASE CH. 10
MKR 1.831 GHz
REF 21.0 dBm
ATTEN 30 dB
-40.90 dBm
10 dB/
OFFSET
1.0
dB
MARKER
1.831 GHz
-40.90 dBm
DL
-7.5
dBm
FCC ID: CLHSKYHAWK98
CORR'D
START 1.00 GHz
STOP 2.00 GHz
RES BW 100 kHz
VBW 300 kHz
SWP 300 msec




FCC ID: CLHSKYHAWK98

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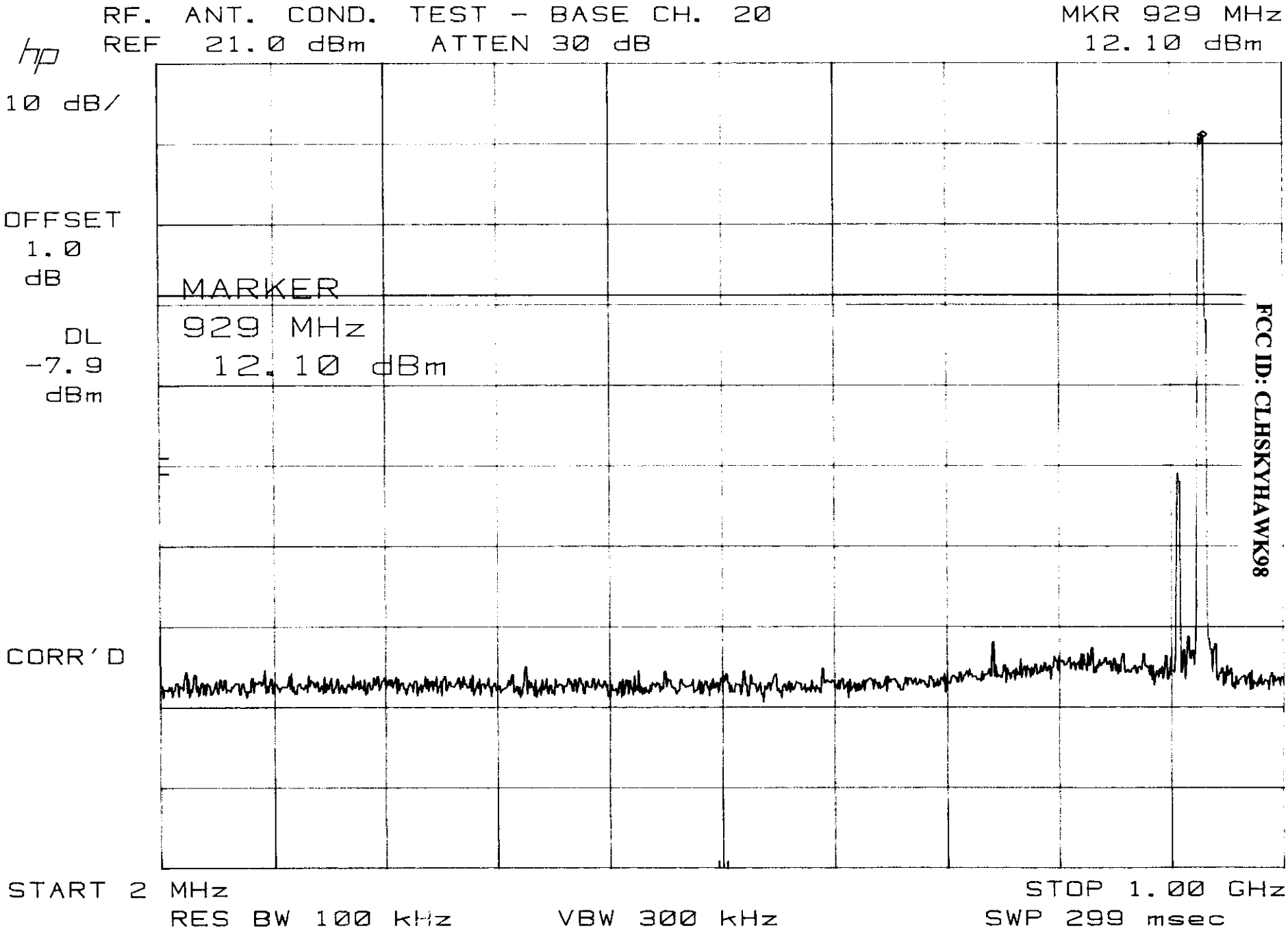


FCC ID: CLHSKYHAWK98

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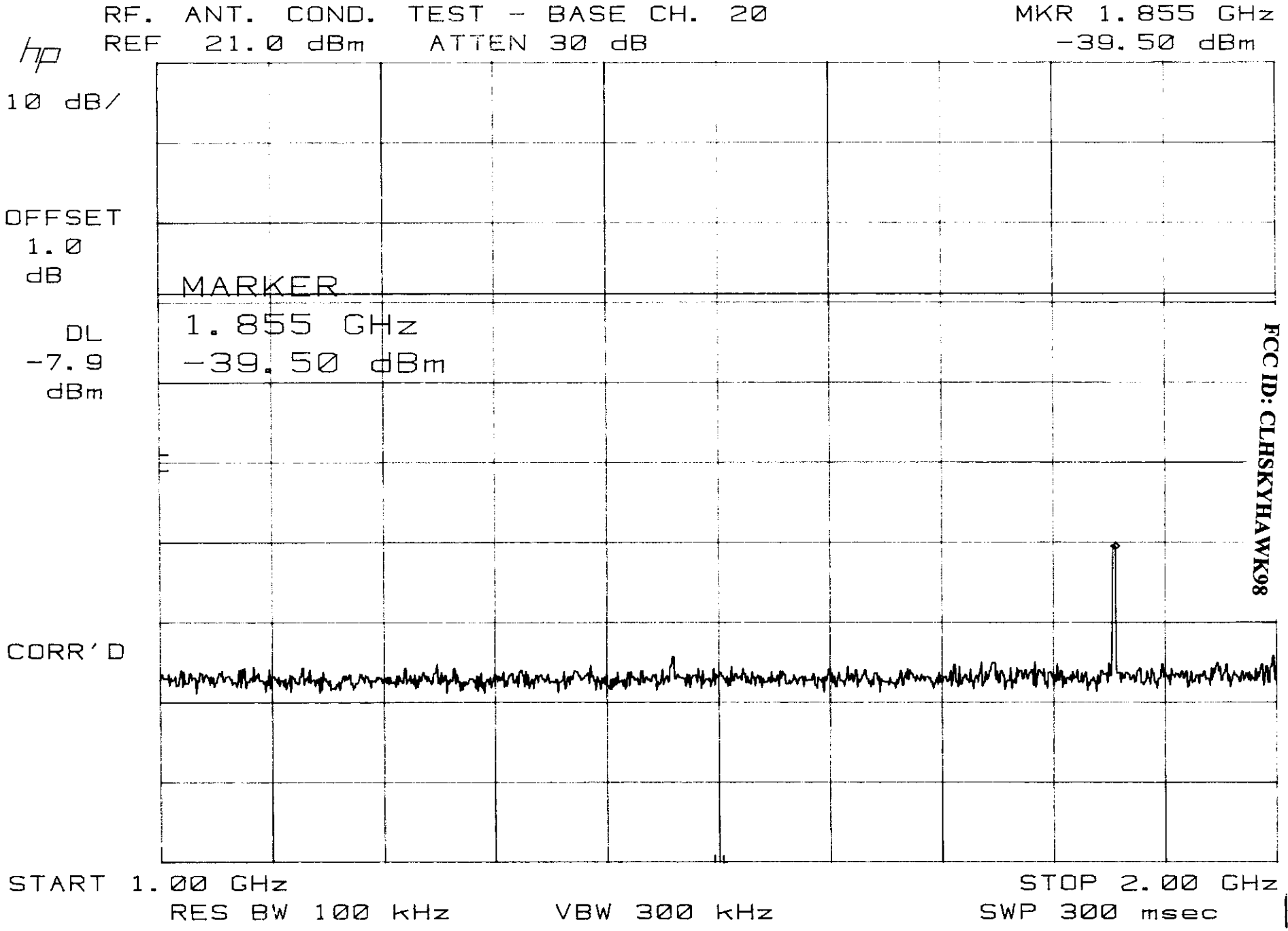
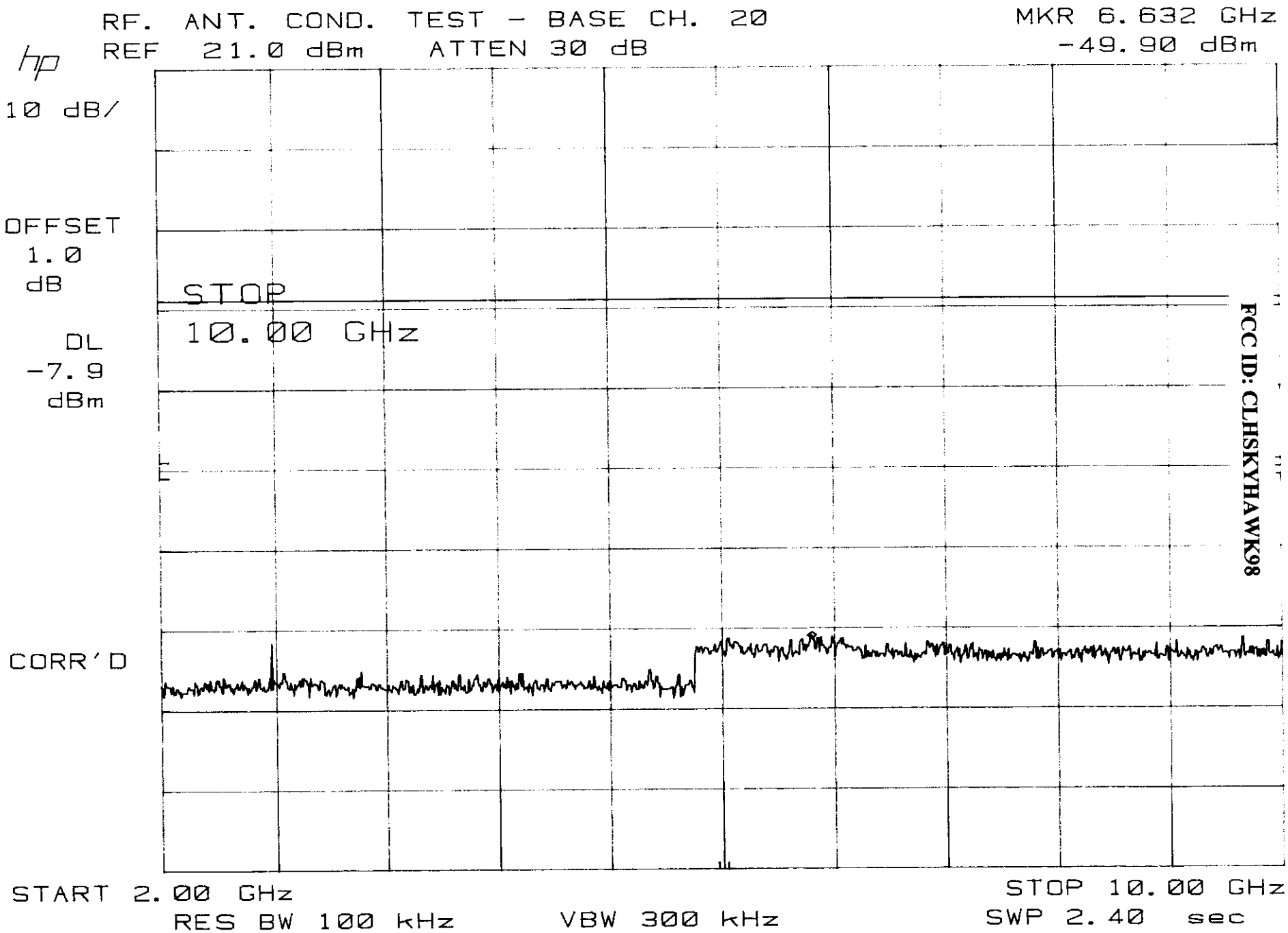



FCC ID: CLHSKYHAWK98

PAGE 29H




FCC ID: CLHSKYHAWK98

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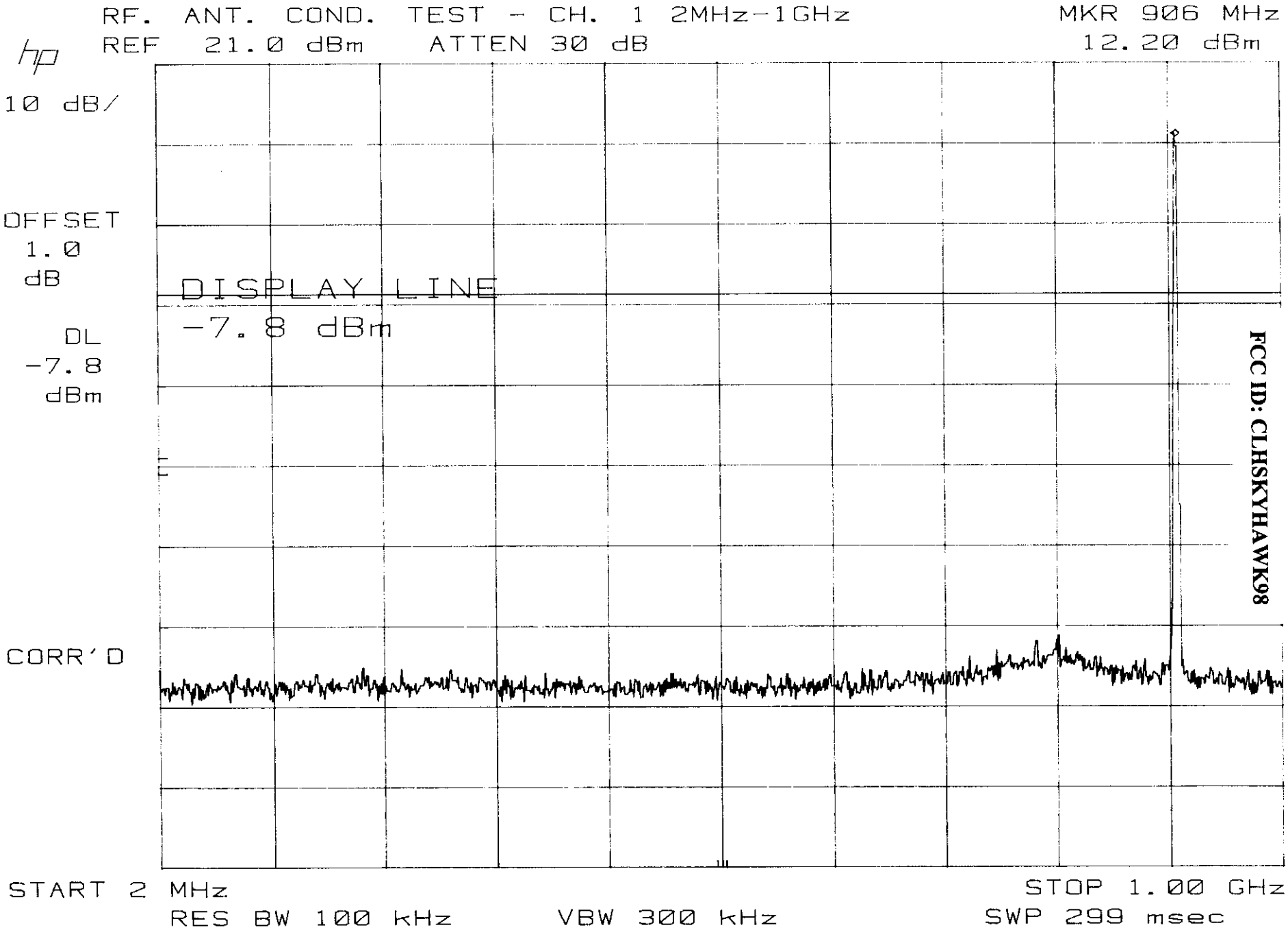


FCC ID: CLHSKYHAWK98

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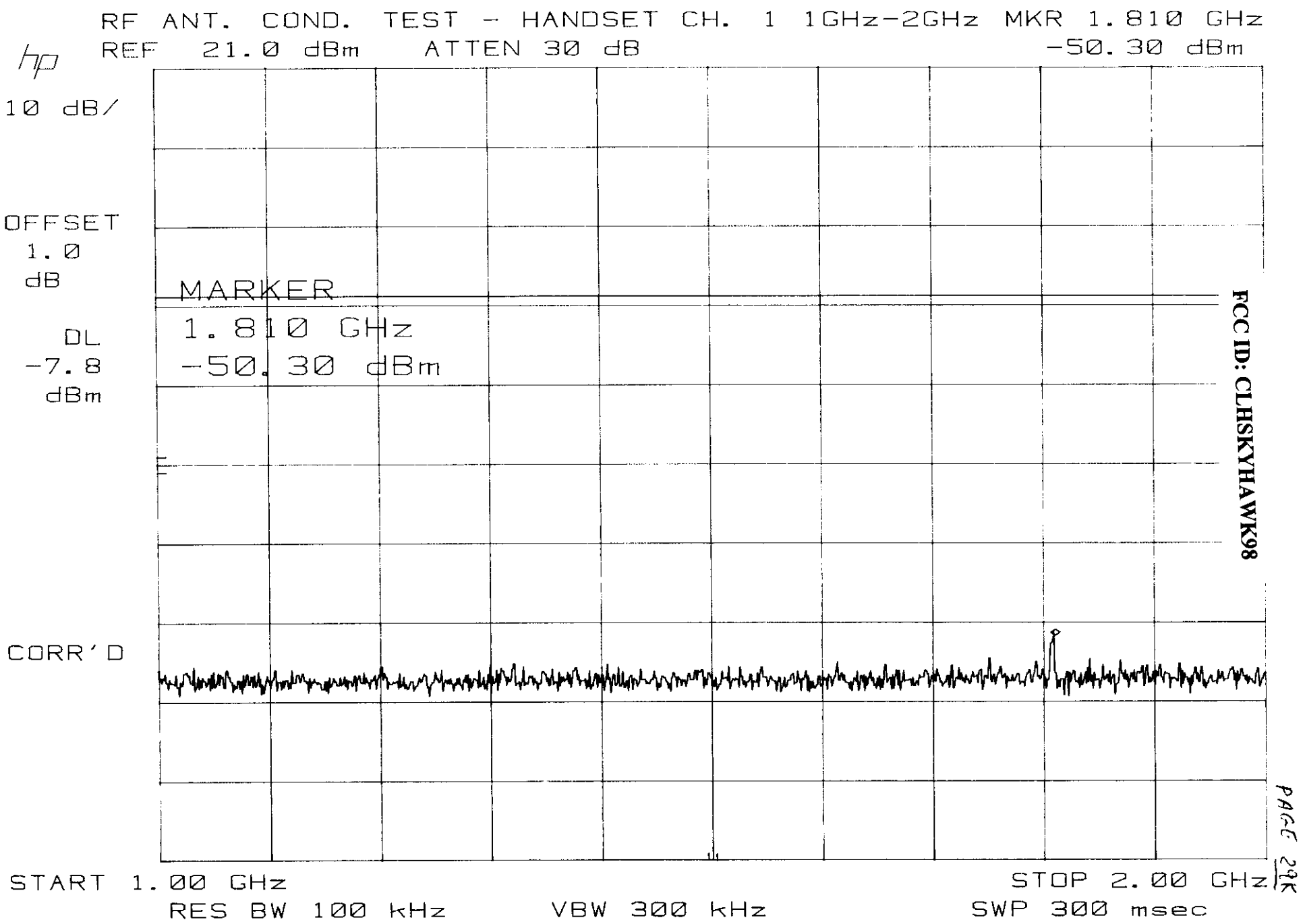


FCC ID: CLHSKYHAWK98

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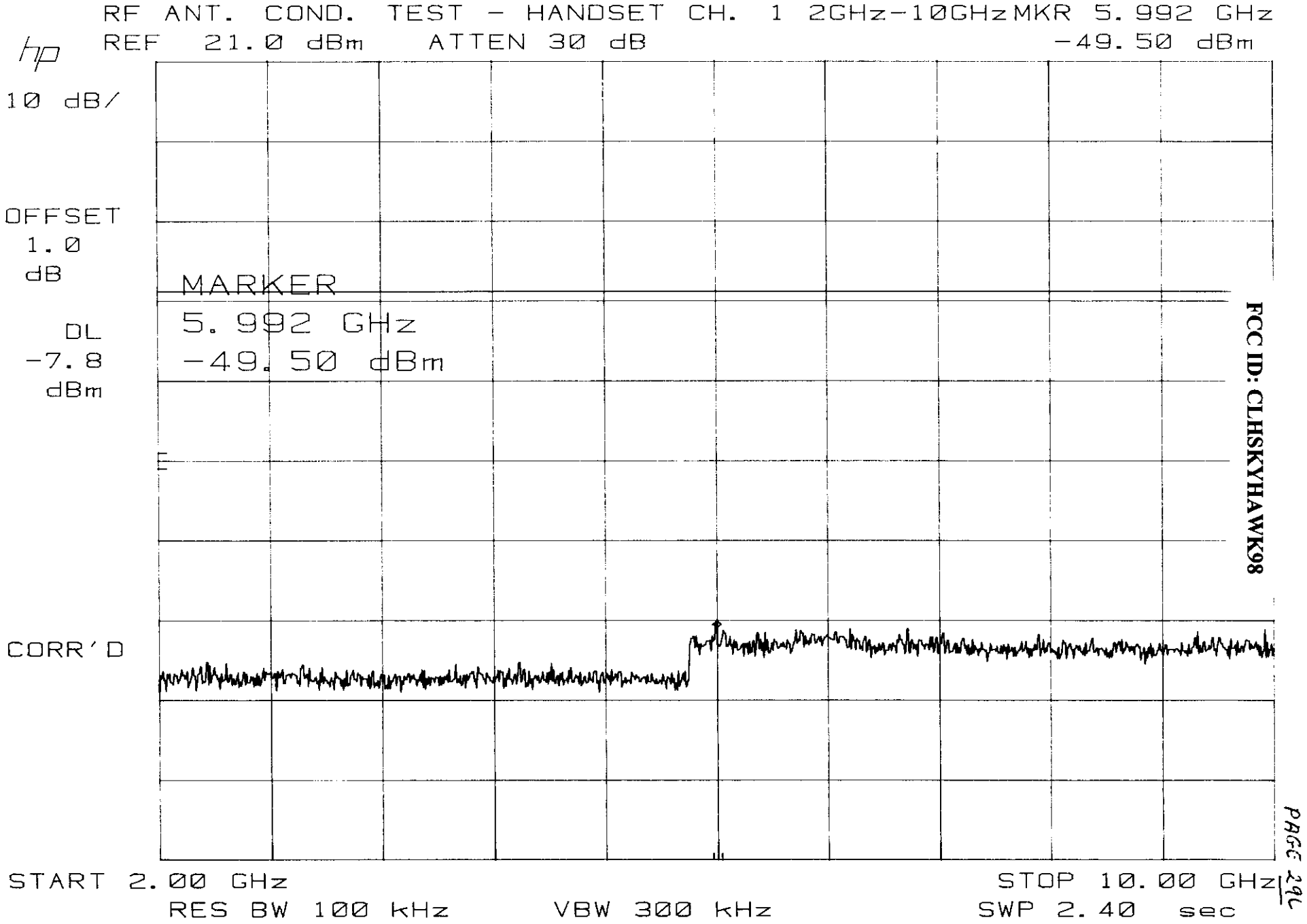


FCC ID: CLHSKYHAWK98

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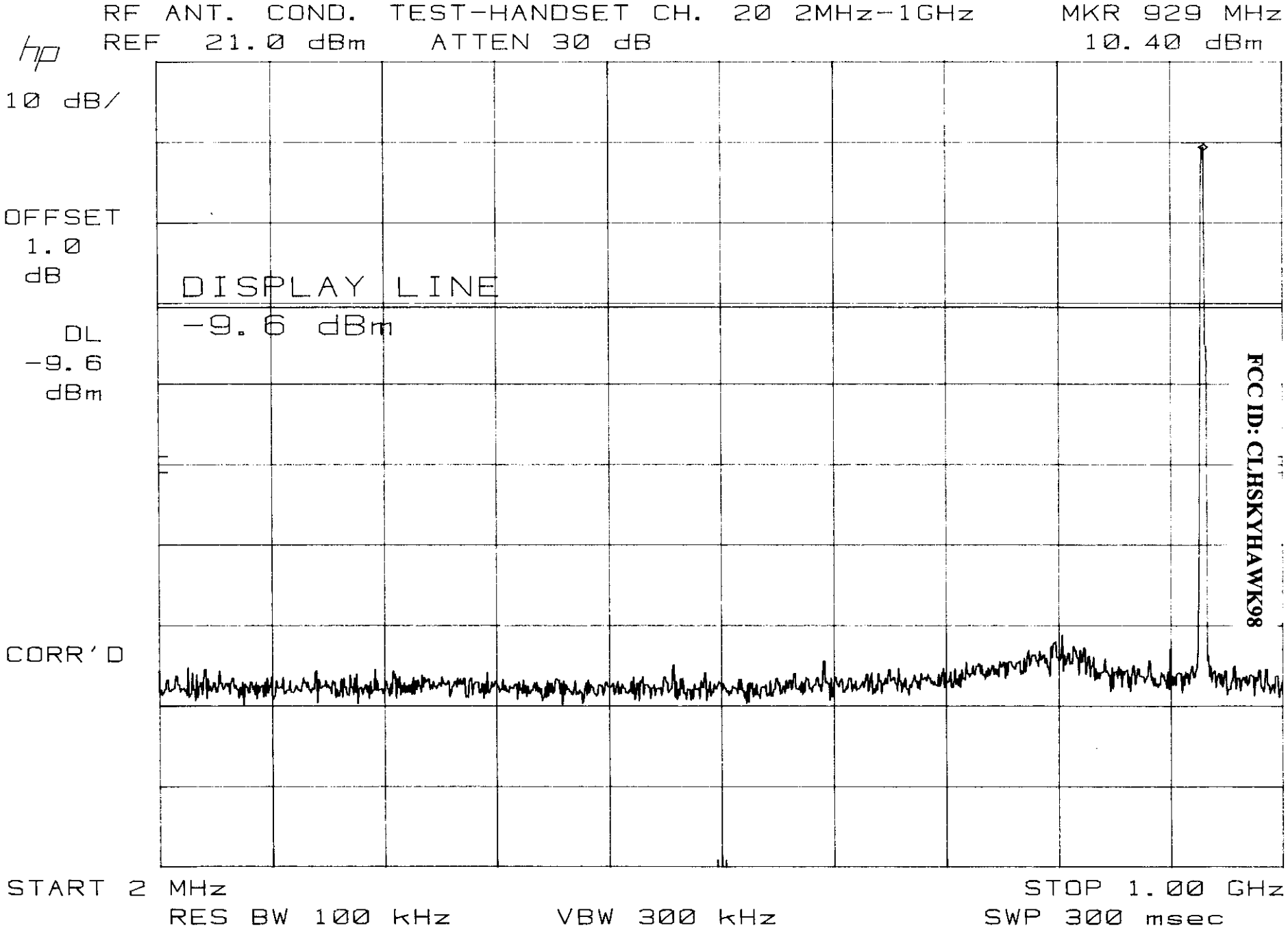
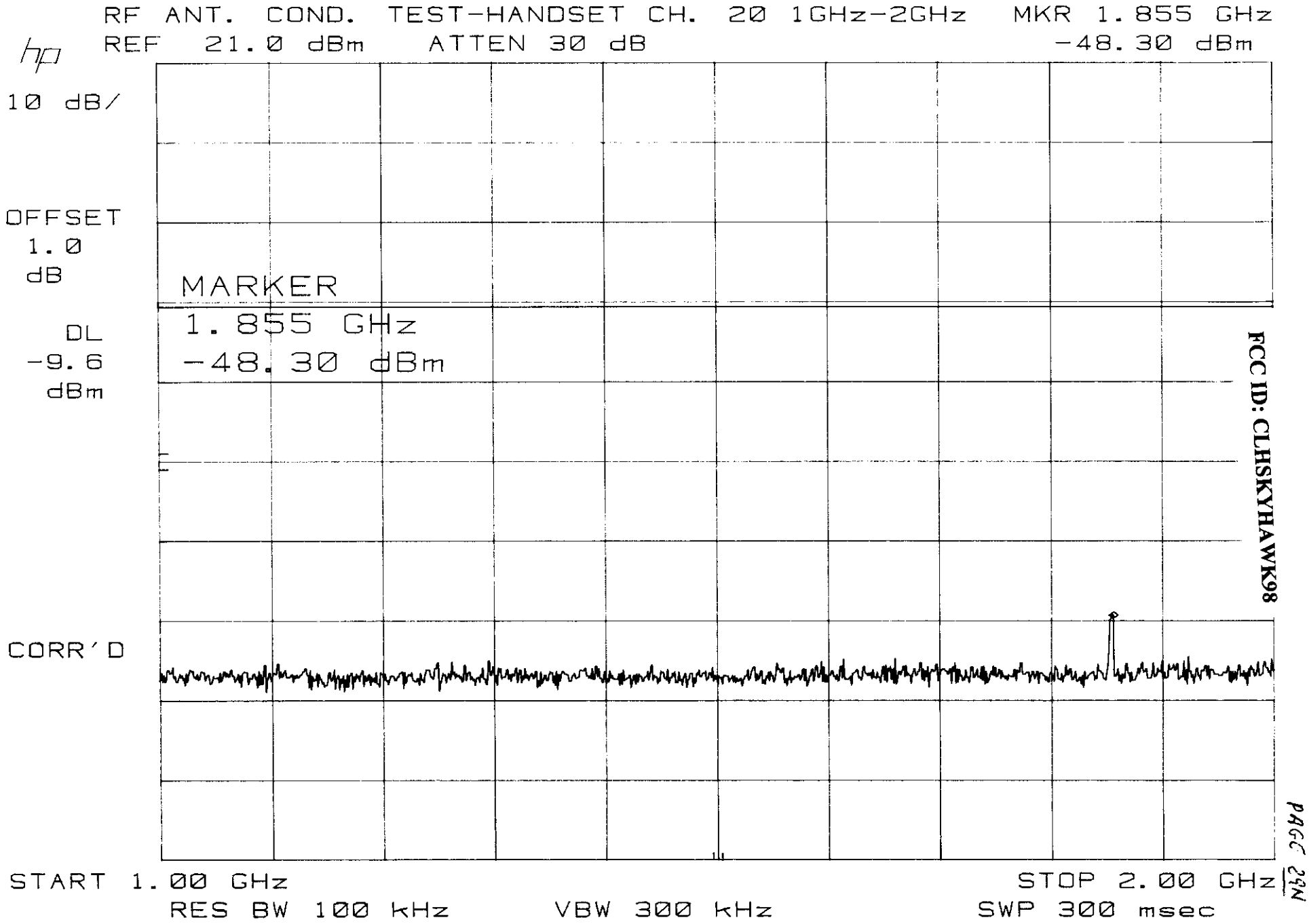
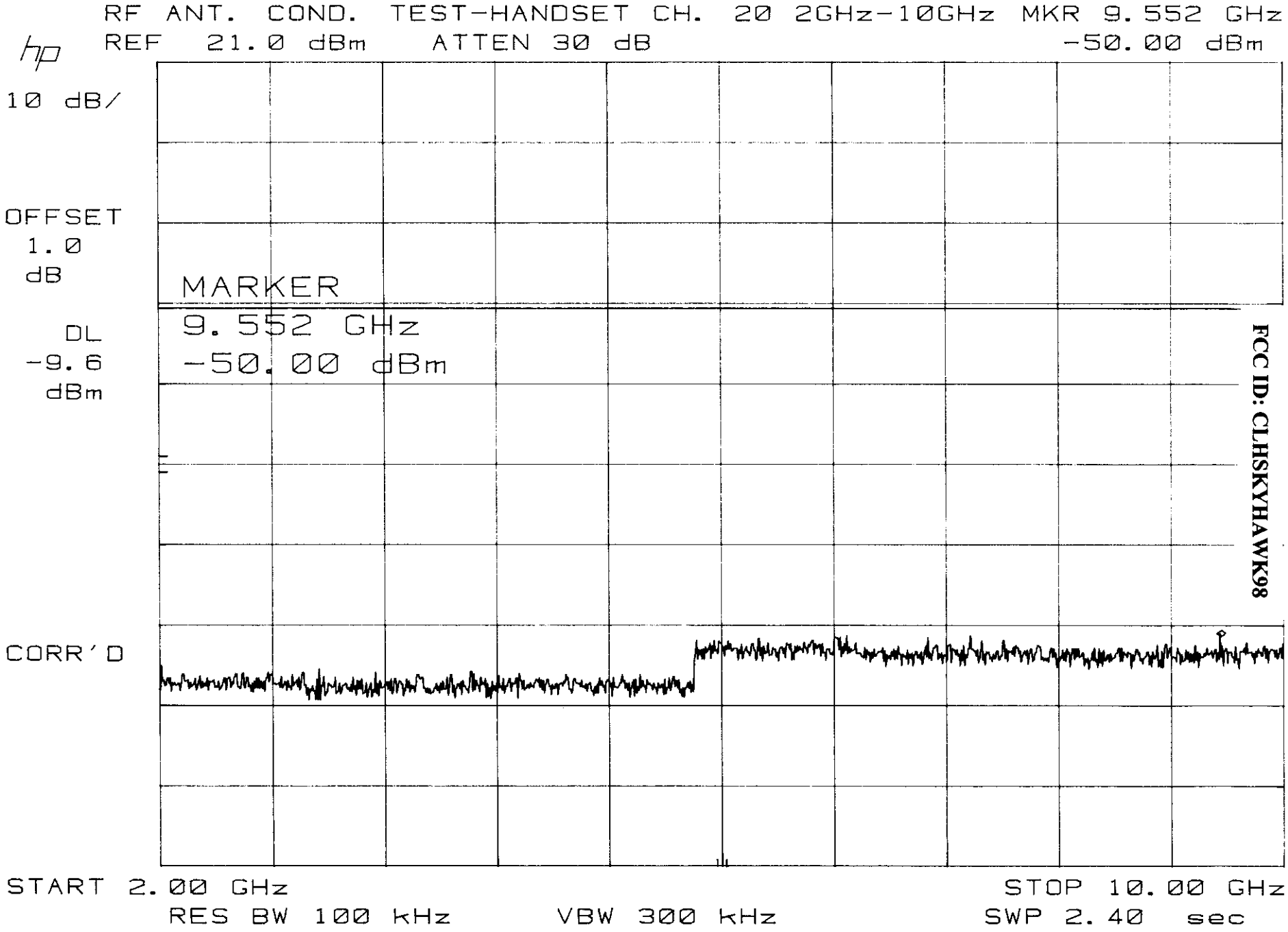

RF ANT. COND. TEST-HANDSET CH. 20 2MHz-1GHz
MKR 929 MHz
REF 21.0 dBm
ATTEN 30 dB
10.40 dBm
10 dB/
OFFSET
1.0
dB
DISPLAY LINE
-9.6 dBm
DL
-9.6
dBm
CORR'D
FCC ID: CLHSKYHAWK98
START 2 MHz
STOP 1.00 GHz
RES BW 100 kHz
VBW 300 kHz
SWP 300 msec




FCC ID: CLHSKYHAWK98

PAGE 24N




FCC ID: CLHSKYHAWK98

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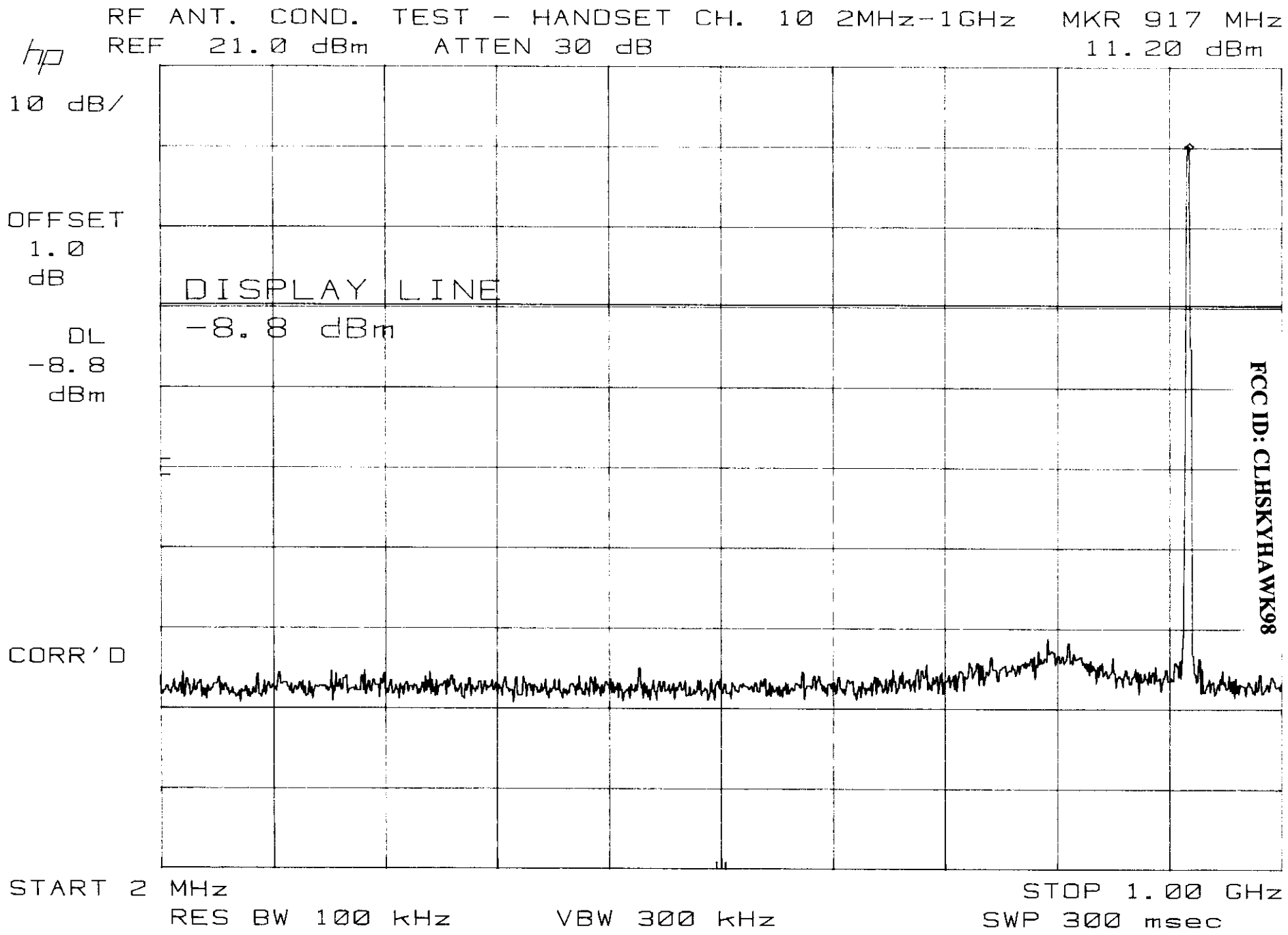


FCC ID: CLHSKYHAWK98

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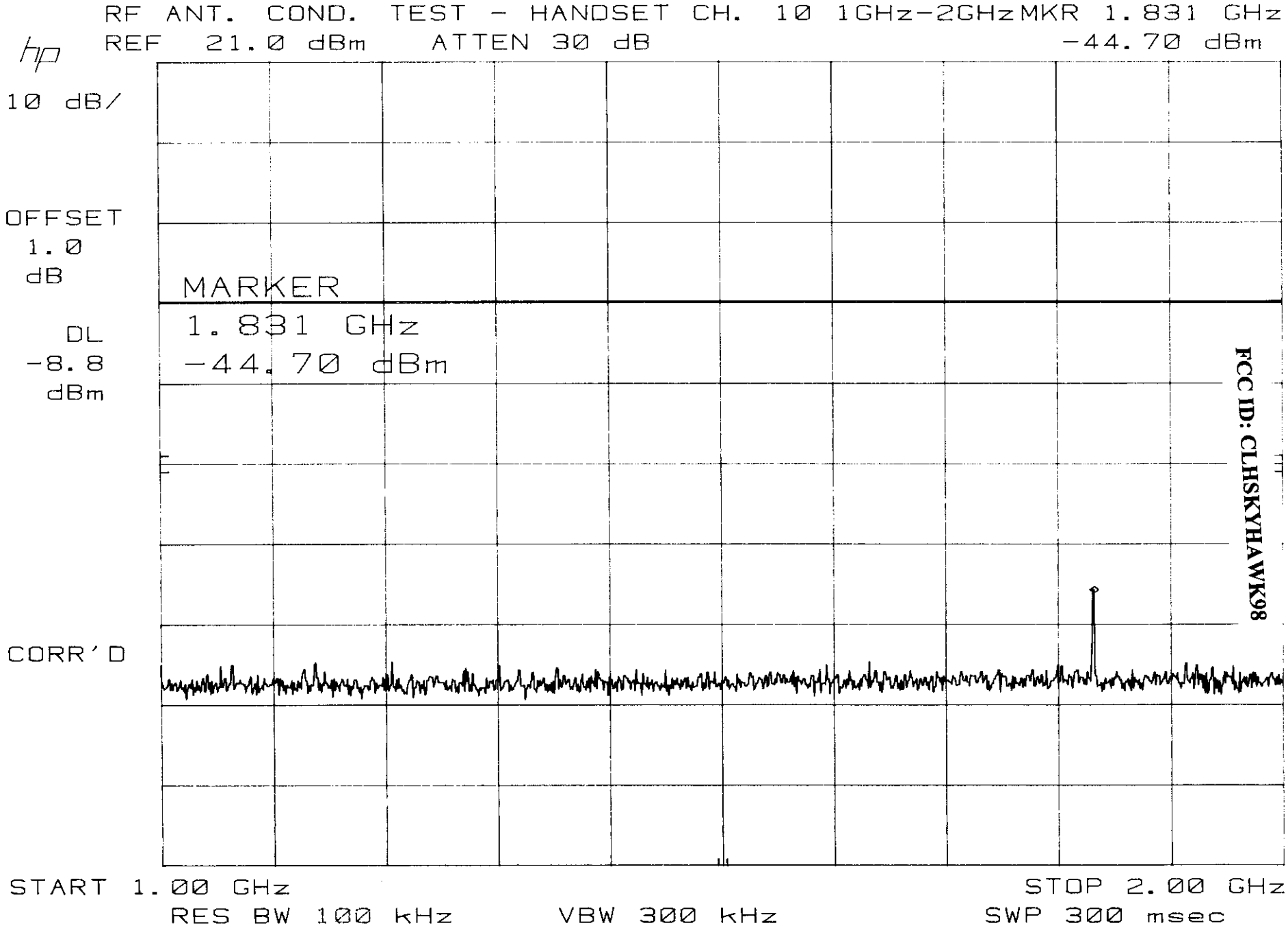
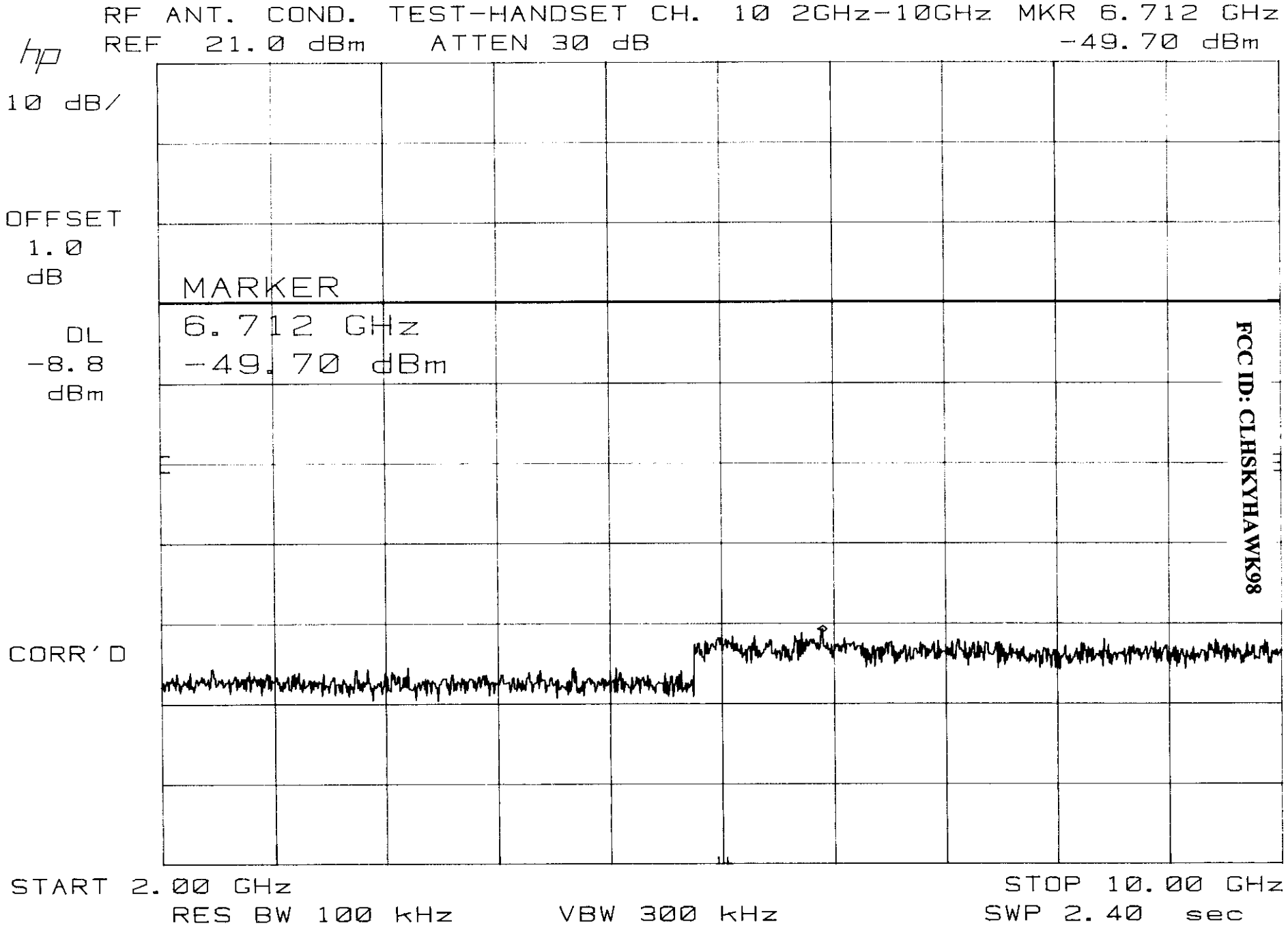

RF ANT. COND. TEST - HANDSET CH. 10 1GHz-2GHz
MKR 1.831 GHz
REF 21.0 dBm
ATTEN 30 dB
-44.70 dBm
10 dB/
OFFSET
1.0
dB
MARKER
1.831 GHz
-44.70 dBm
DL
-8.8
dBm
CORR'D
FCC ID: CLHSKYHAWK98
START 1.00 GHz
STOP 2.00 GHz
RES BW 100 kHz
VBW 300 kHz
SWP 300 msec


RF ANT. COND. TEST-HANDSET CH. 10 2GHz-10GHz MKR 6.712 GHz
REF 21.0 dBm ATTEN 30 dB -49.70 dBm
10 dB/
OFFSET
1.0
dB
MARKER
6.712 GHz
-49.70 dBm
DL
-8.8
dBm
FCC ID: CLHSKYHAWK98
CORR'D
START 2.00 GHz
STOP 10.00 GHz
RES BW 100 kHz
VBW 300 kHz
SWP 2.40 sec

## 14.6 RF Band Edges

The RF band edges were taken at the edges of the ISM spectrum (902 MHz when the EUT was on channel 1 and 928 MHz when the EUT was on channel 20) for both the base and handset using the spectrum analyzer. The RF band edges were measured using a direct connection from the RF out on the RF board for both the base and handset into the input of the analyzer. The resolution bandwidth was 100 kHz, and the video bandwidth 300 kHz. The marker was placed at 902 MHz (for channel 1) and 928 MHz (for channel 20). This frequency was then checked to see that it was 20 dB below the band that contained the highest level of desired power.

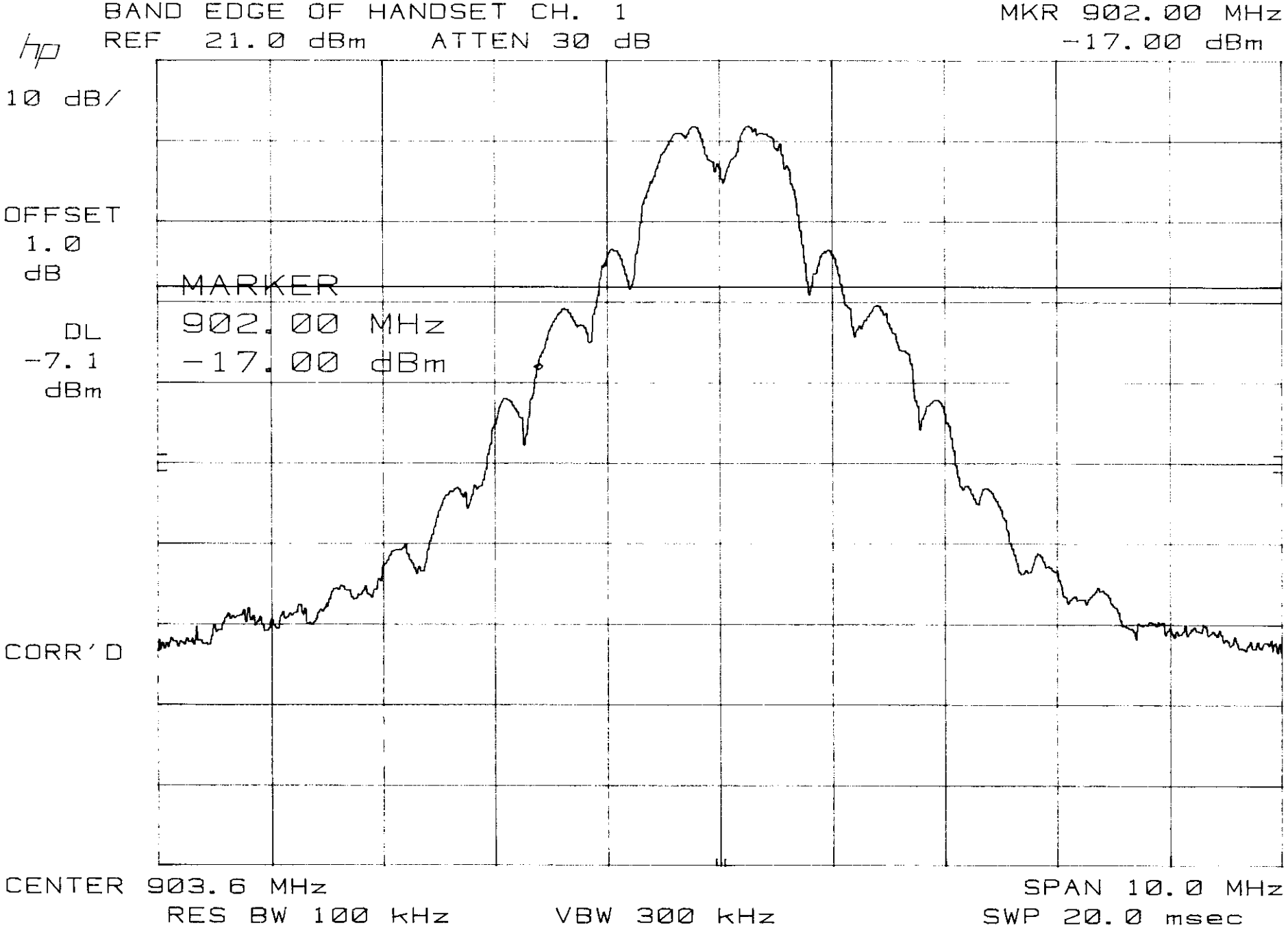
Test Results:

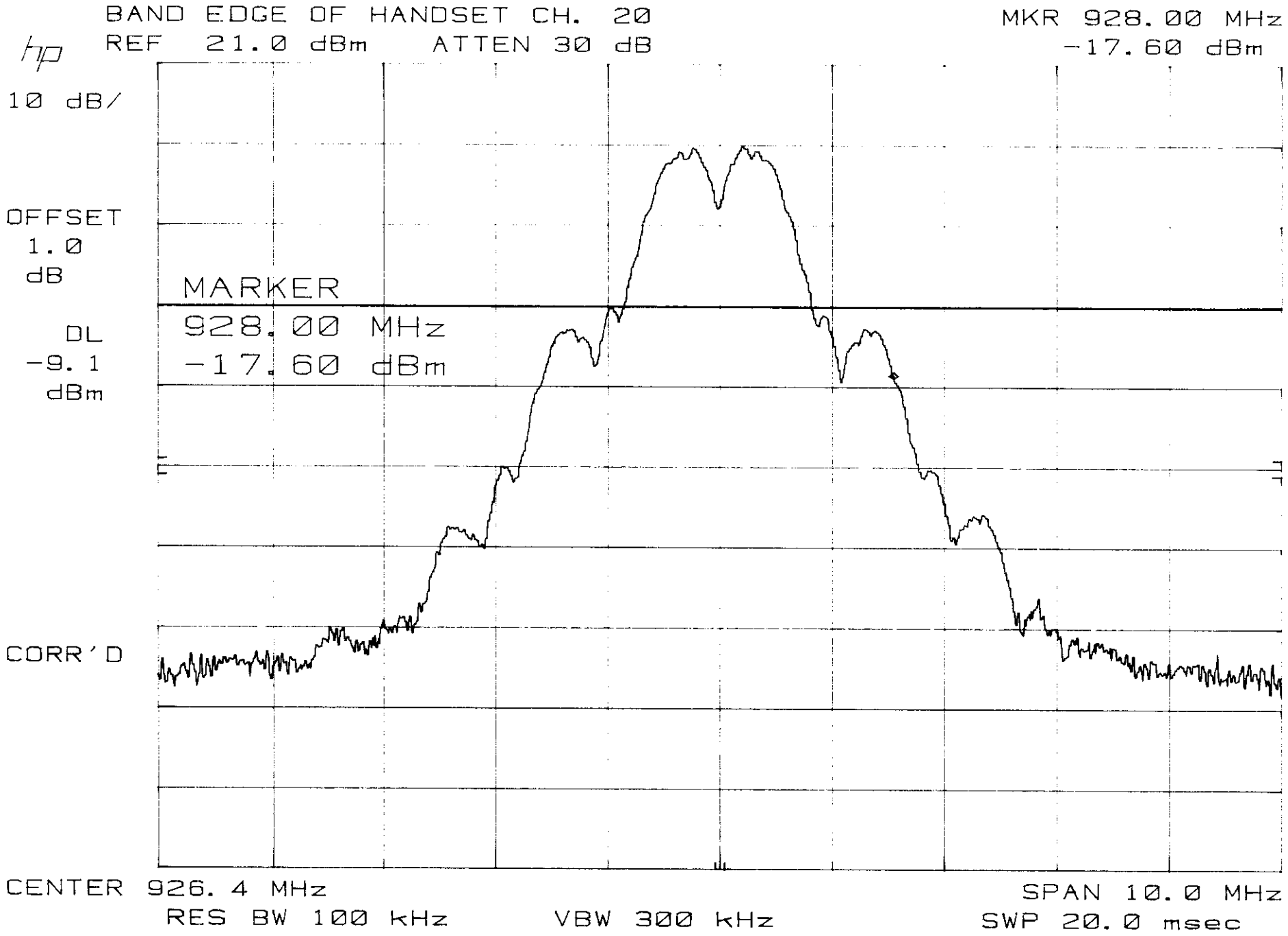
The EUT complies with the relevant requirements of FCC Title 47, Part 15, Subpart C section 15.209 (c). The RF power at the band edges is at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of desired power.

**SECTION 14.6.1**

# *RF BAND EDGES FOR THE BASE AND HANDSET DATA SHEETS*

114 OLINDA DRIVE, BREA, CALIFORNIA 92823 PHONE: (714) 579-0500 FAX: (714) 579-1850


BAND EDGE OF HANDSET CH. 1
MKR 902.00 MHz
REF 21.0 dBm
ATTEN 30 dB
-17.00 dBm
10 dB/
OFFSET
1.0
dB
MARKER
902.00 MHz
-17.00 dBm
DL
-7.1
dBm
CORR'D
CENTER 903.6 MHz
SPAN 10.0 MHz
RES BW 100 kHz
VBW 300 kHz
SWP 20.0 msec


BAND EDGE OF HANDSET CH. 20
REF 21.0 dBm ATTEN 30 dB
MKR 928.00 MHz
-17.60 dBm
10 dB/
OFFSET
1.0
dB
MARKER
928.00 MHz
-17.60 dBm
DL
-9.1
dBm
CORR'D
CENTER 926.4 MHz
SPAN 10.0 MHz
RES BW 100 kHz
VBW 300 kHz
SWP 20.0 msec

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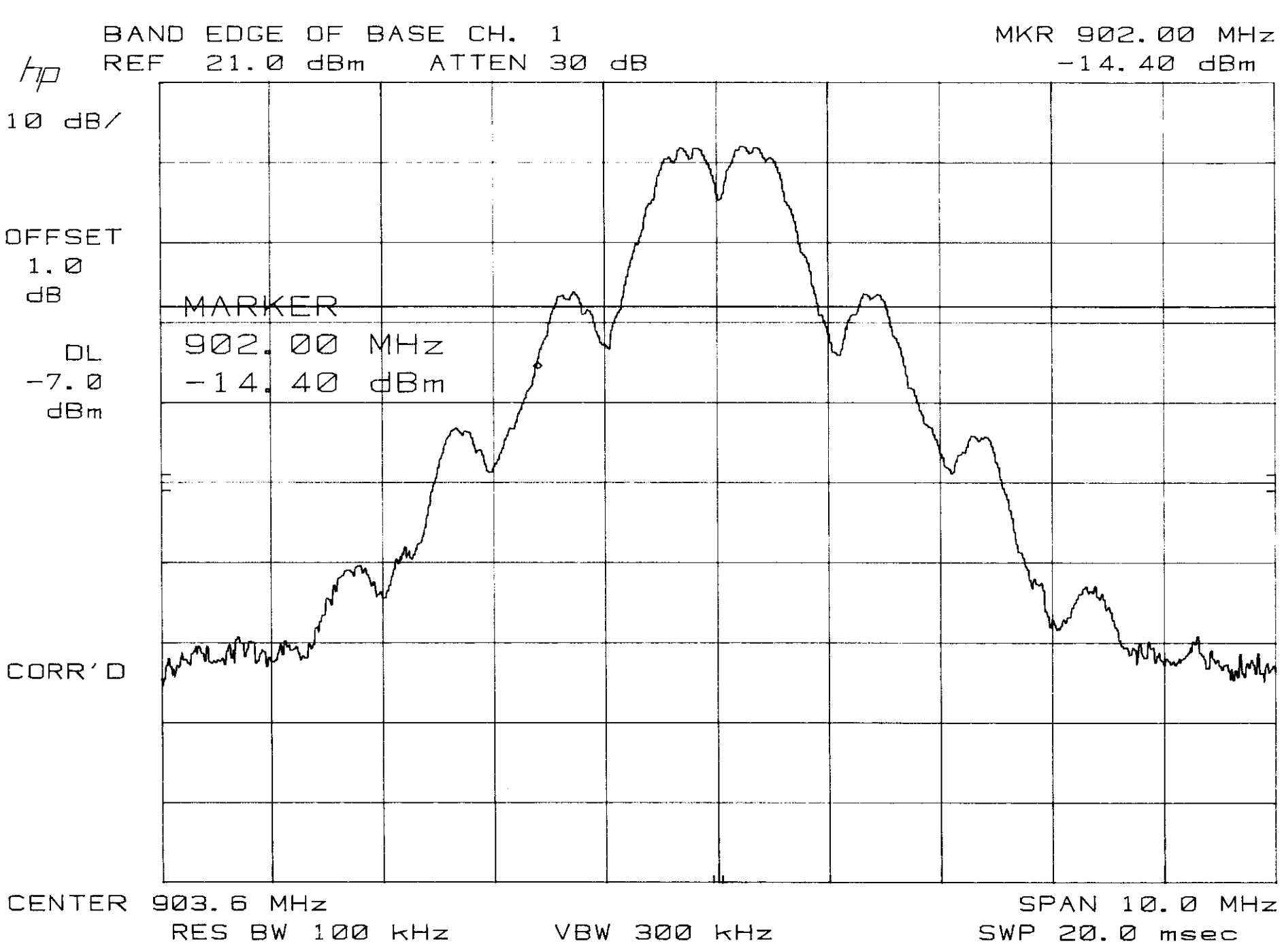
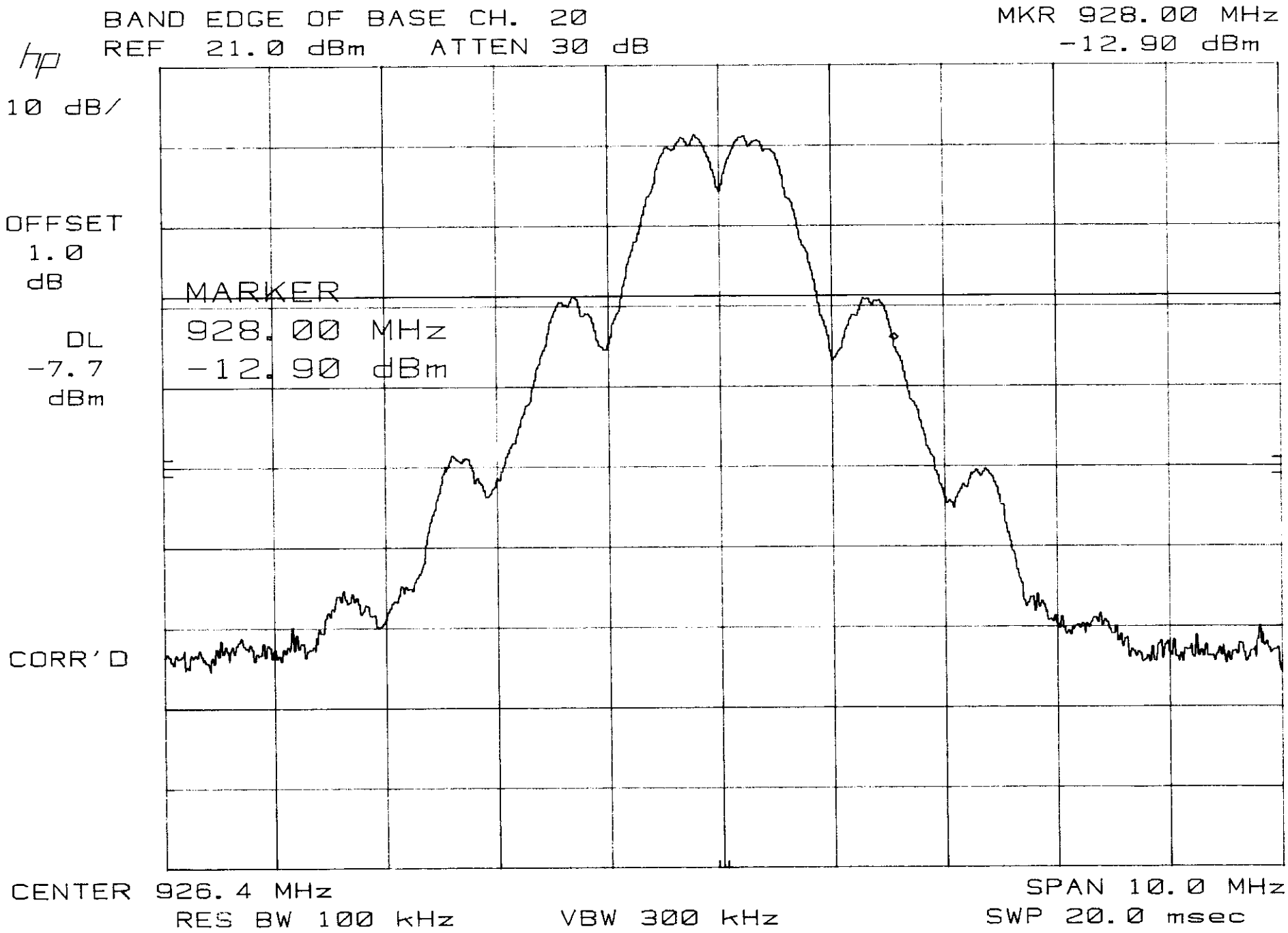

BAND EDGE OF BASE CH. 1
MKR 902.00 MHz
REF 21.0 dBm
ATTEN 30 dB
-14.40 dBm
10 dB/
OFFSET
1.0
dB
MARKER
902.00 MHz
-14.40 dBm
DL
-7.0
dBm
CORR'D
CENTER 903.6 MHz
SPAN 10.0 MHz
RES BW 100 kHz
VBW 300 kHz
SWP 20.0 msec


BAND EDGE OF BASE CH. 20
MKR 928.00 MHz
REF 21.0 dBm ATTEN 30 dB
-12.90 dBm
10 dB/
OFFSET
1.0
dB
MARKER
928.00 MHz
-12.90 dBm
DL
-7.7
dBm
CORR'D
CENTER 926.4 MHz
SPAN 10.0 MHz
RES BW 100 kHz
VBW 300 kHz
SWP 20.0 msec

## 14.7 Processing Gain Measurement Procedure

**Processing Gain - base station output to handset input**

The base was connected by its test connector (an internal serial port) to the communications analyzer (computer) via com port 1. 60 dB of attenuation was placed on the output of the base. The output of the base was combined with the output of the signal generator through a combiner. The handset was connected by its test connector (an internal serial port) to the communications analyzer (computer) via com port 2. The signal generator was stepped in 50 kHz increments across the passband (± of the fundamental transmit frequency. The Bit Error Rate used was 0.1%. When this error rate was achieved (displayed on the computer), the reading of the signal generator was taken. This reading was then subtracted from the signal level of the base station (while adding in the combiner loss and signal generator calibration factor) to obtain the J/S ratio. The J/S ratio was then combined with the system loss (2 dB) and signal to noise ratio (8 dB) of the unit to obtain the processing gain.

**Processing Gain - handset output to base station input**

The handset was connected by its test connector (an internal serial port) to the communications analyzer (computer) via com port 1. 60 dB of attenuation was placed on the output of the handset. The output of the handset was combined with the output of the signal generator through a combiner. The base was connected by its test connector (an internal serial port) to the communications analyzer (computer) via com port 2. The signal generator was stepped in 50 kHz increments across the passband of the fundamental transmit frequency. The Bit Error Rate used was 0.1%. When this error rate was achieved (displayed on the computer), the reading of the signal generator was taken. This reading was then subtracted from the signal level of the base station (while adding in the combiner loss and signal generator calibration factor) to obtain the J/S ratio. The J/S ratio was then combined with the system loss (2 dB) and signal to noise ratio (8 dB) of the unit to obtain the processing gain.

**SECTION 14.7.1**

# *PROCESSING GAIN FOR THE BASE AND HANDSET DATA SHEETS*

# PROCESSING GAIN TEST

**CHANNEL 10 (914.40 MHz) - Base output to Handset input**

| Jammer Freq. (MHz) | Transmitter Output (dBm) | Signal Level (dBm) | CW Noise (dBm) | Mj J/S ratio (dB) | Processing Gain (dBm) |
|---|---|---|---|---|---|
| 914.40 | 8.40 | -55.60 | -45.40 | 6.90 | 16.90 |
| 914.45 | 8.40 | -55.60 | -45.80 | 6.50 | 16.50 |
| 914.50 | 8.40 | -55.60 | -44.40 | 7.90 | 17.90 |
| 914.55 | 8.40 | -55.60 | -44.40 | 7.90 | 17.90 |
| 914.60 | 8.40 | -55.60 | -44.40 | 7.90 | 17.90 |
| 914.65 | 8.40 | -55.60 | -44.60 | 7.70 | 17.70 |
| 914.70 | 8.40 | -55.60 | -45.00 | 7.30 | 17.30 |
| 914.75 | 8.40 | -55.60 | -45.00 | 7.30 | 17.30 |
| 914.80 | 8.40 | -55.60 | -45.80 | 6.50 | 16.50 |
| 914.85 | 8.40 | -55.60 | -38.00 | 14.30 | 24.30 |
| 914.90 | 8.40 | -55.60 | -45.80 | 6.50 | 16.50 |
| 914.95 | 8.40 | -55.60 | -36.60 | 15.70 | 25.70 |
| 915.00 | 8.40 | -55.60 | -41.80 | 10.50 | 20.50 |
| 915.05 | 8.40 | -55.60 | -41.40 | 10.90 | 20.90 |
| 915.10 | 8.40 | -55.60 | -39.00 | 13.30 | 23.30 |
| 915.15 | 8.40 | -55.60 | -39.00 | 13.30 | 23.30 |
| 915.20 | 8.40 | -55.60 | -36.20 | 16.10 | 26.10 |
| 915.25 | 8.40 | -55.60 | -33.40 | 18.90 | 28.90 |
| 915.30 | 8.40 | -55.60 | -32.00 | 20.30 | 30.30 |
| 915.35 | 8.40 | -55.60 | -32.40 | 19.90 | 29.90 |

**LOSSES**

| | |
|---|---|
| Attenuation | **60** |
| Combiner Loss | **3** |
| Cable Loss | **1** |
| System Loss | **2** |
| S/N ratio | **8** |
| Sig. Gen. Cal Factor | **0.3** |

Signal Level = Tx Output - Attenuation - Combiner Loss - Cable Loss

Mj J/S ratio = CW Noise - Sig. Level - Combiner Loss - Sig. Gen. Factor

Processing Gain = Mj J/S ratio + System Loss + S/N Ratio

**CHANNEL 10 (914.40 MHz) - Base output to Handset input**

| Jammer Freq. (MHz) | Transmitter Output (dBm) | Signal Level (dBm) | CW Noise (dBm) | Mj J/S ratio (dB) | Processing Gain (dBm) |
|---|---|---|---|---|---|
| 913.65 | 8.40 | -55.60 | -37.80 | 14.50 | 24.50 |
| 913.70 | 8.40 | -55.60 | -37.80 | 14.50 | 24.50 |
| 913.75 | 8.40 | -55.60 | -38.40 | 13.90 | 23.90 |
| 913.80 | 8.40 | -55.60 | -38.20 | 14.10 | 24.10 |
| 913.85 | 8.40 | -55.60 | -43.60 | 8.70 | 18.70 |
| 913.90 | 8.40 | -55.60 | -37.80 | 14.50 | 24.50 |
| 913.95 | 8.40 | -55.60 | -43.80 | 8.50 | 18.50 |
| 914.00 | 8.40 | -55.60 | -41.80 | 10.50 | 20.50 |
| 914.05 | 8.40 | -55.60 | -48.00 | 4.30 | 14.30 |
| 914.10 | 8.40 | -55.60 | -47.60 | 4.70 | 14.70 |
| 914.15 | 8.40 | -55.60 | -46.20 | 6.10 | 16.10 |
| 914.20 | 8.40 | -55.60 | -46.00 | 6.30 | 16.30 |
| 914.25 | 8.40 | -55.60 | -43.60 | 8.70 | 18.70 |
| 914.30 | 8.40 | -55.60 | -46.80 | 5.50 | 15.50 |
| 914.35 | 8.40 | -55.60 | -43.60 | 8.70 | 18.70 |

PROCESSING GAIN WORKSHEET

# PROCESSING GAIN TEST

**CHANNEL 10 (914.40 MHz) - Handset output to Base input**

| Jammer Freq. (MHz) | Transmitter Output (dBm) | Signal Level (dBm) | CW Noise (dBm) | Mj J/S ratio (dB) | Processing Gain (dBm) |
|---|---|---|---|---|---|
| 914.40 | 9.00 | -55.00 | -45.50 | 6.20 | 16.20 |
| 914.45 | 9.00 | -55.00 | -45.30 | 6.40 | 16.40 |
| 914.50 | 9.00 | -55.00 | -45.50 | 6.20 | 16.20 |
| 914.55 | 9.00 | -55.00 | -45.50 | 6.20 | 16.20 |
| 914.60 | 9.00 | -55.00 | -45.50 | 6.20 | 16.20 |
| 914.65 | 9.00 | -55.00 | -45.30 | 6.40 | 16.40 |
| 914.70 | 9.00 | -55.00 | -45.50 | 6.20 | 16.20 |
| 914.75 | 9.00 | -55.00 | -46.50 | 5.20 | 15.20 |
| 914.80 | 9.00 | -55.00 | -48.10 | 3.60 | 13.60 |
| 914.85 | 9.00 | -55.00 | -37.30 | 14.40 | 24.40 |
| 914.90 | 9.00 | -55.00 | -47.00 | 4.70 | 14.70 |
| 914.95 | 9.00 | -55.00 | -37.00 | 14.70 | 24.70 |
| 915.00 | 9.00 | -55.00 | -37.00 | 14.70 | 24.70 |
| 915.05 | 9.00 | -55.00 | -38.70 | 13.00 | 23.00 |
| 915.10 | 9.00 | -55.00 | -38.90 | 12.80 | 22.80 |
| 915.15 | 9.00 | -55.00 | -39.10 | 12.60 | 22.60 |
| 915.20 | 9.00 | -55.00 | -34.50 | 17.20 | 27.20 |
| 915.25 | 9.00 | -55.00 | -34.50 | 17.20 | 27.20 |
| 915.30 | 9.00 | -55.00 | -31.90 | 19.80 | 29.80 |
| 915.35 | 9.00 | -55.00 | -31.90 | 19.80 | 29.80 |

**LOSSES**

| | |
|---|---|
| Attenuation | **60** |
| Combiner Loss | **3** |
| Cable Loss | **1** |
| System Loss | **2** |
| S/N ratio | **8** |
| Sig. Gen. Cal Factor | **0.3** |

Signal Level = Tx Output - Attenuation - Combiner Loss - Cable Loss

Mj J/S ratio = CW Noise - Sig. Level - Combiner Loss - Sig. Gen. Factor

Processing Gain = Mj J/S ratio + System Loss + S/N Ratio

**CHANNEL 10 (914.40 MHz) - Handset output to Base input**

| Jammer Freq. (MHz) | Transmitter Output (dBm) | Signal Level (dBm) | CW Noise (dBm) | Mj J/S ratio (dB) | Processing Gain (dBm) |
|---|---|---|---|---|---|
| 913.65 | 9.00 | -55.00 | -37.60 | 14.10 | 24.10 |
| 913.70 | 9.00 | -55.00 | -38.20 | 13.50 | 23.50 |
| 913.75 | 9.00 | -55.00 | -39.00 | 12.70 | 22.70 |
| 913.80 | 9.00 | -55.00 | -39.00 | 12.70 | 22.70 |
| 913.85 | 9.00 | -55.00 | -44.20 | 7.50 | 17.50 |
| 913.90 | 9.00 | -55.00 | -36.80 | 14.90 | 24.90 |
| 913.95 | 9.00 | -55.00 | -43.40 | 8.30 | 18.30 |
| 914.00 | 9.00 | -55.00 | -41.40 | 10.30 | 20.30 |
| 914.05 | 9.00 | -55.00 | -47.40 | 4.30 | 14.30 |
| 914.10 | 9.00 | -55.00 | -47.40 | 4.30 | 14.30 |
| 914.15 | 9.00 | -55.00 | -45.80 | 5.90 | 15.90 |
| 914.20 | 9.00 | -55.00 | -47.20 | 4.50 | 14.50 |
| 914.25 | 9.00 | -55.00 | -47.20 | 4.50 | 14.50 |
| 914.30 | 9.00 | -55.00 | -46.80 | 4.90 | 14.90 |
| 914.35 | 9.00 | -55.00 | -46.00 | 5.70 | 15.70 |

## 15. CONCLUSIONS

The 900 MHz Digital Spread Spectrum Cordless Phone Model: SKYHAWK98 meets all of the specification limits defined in FCC Title 47, Part 15, Subpart C section 15.247.

# APPENDIX A

# *TEST SETUP DIAGRAMS AND PHOTOS*

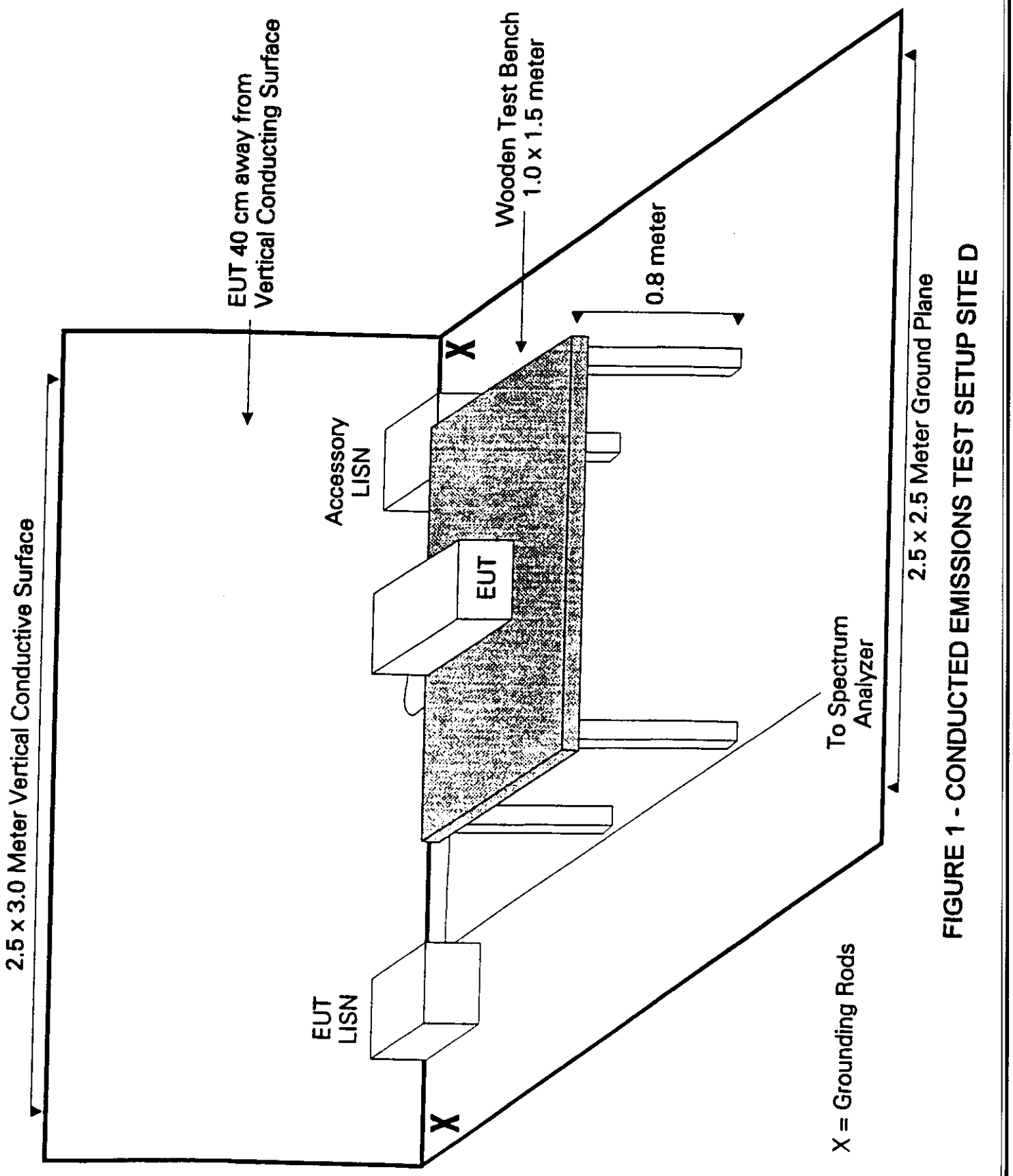



FIGURE 1 - CONDUCTED EMISSIONS TEST SETUP SITE D

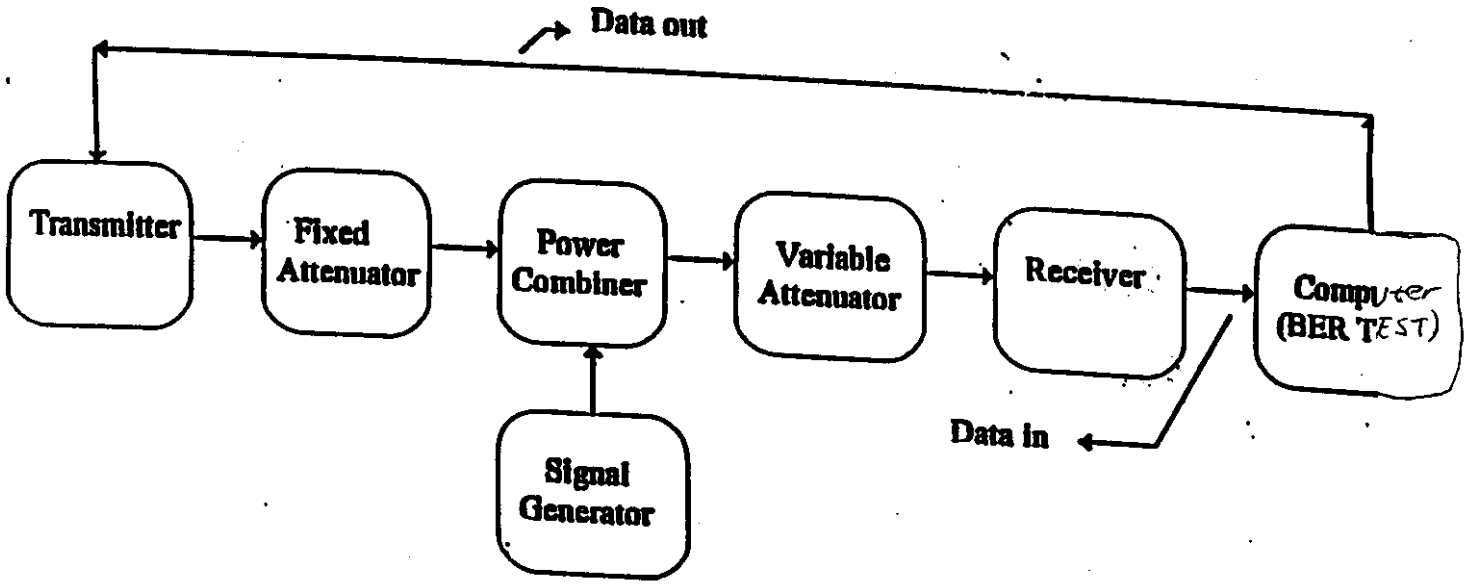



Figure 1a

The Fixed attenuator is about to 60 dB attenuation

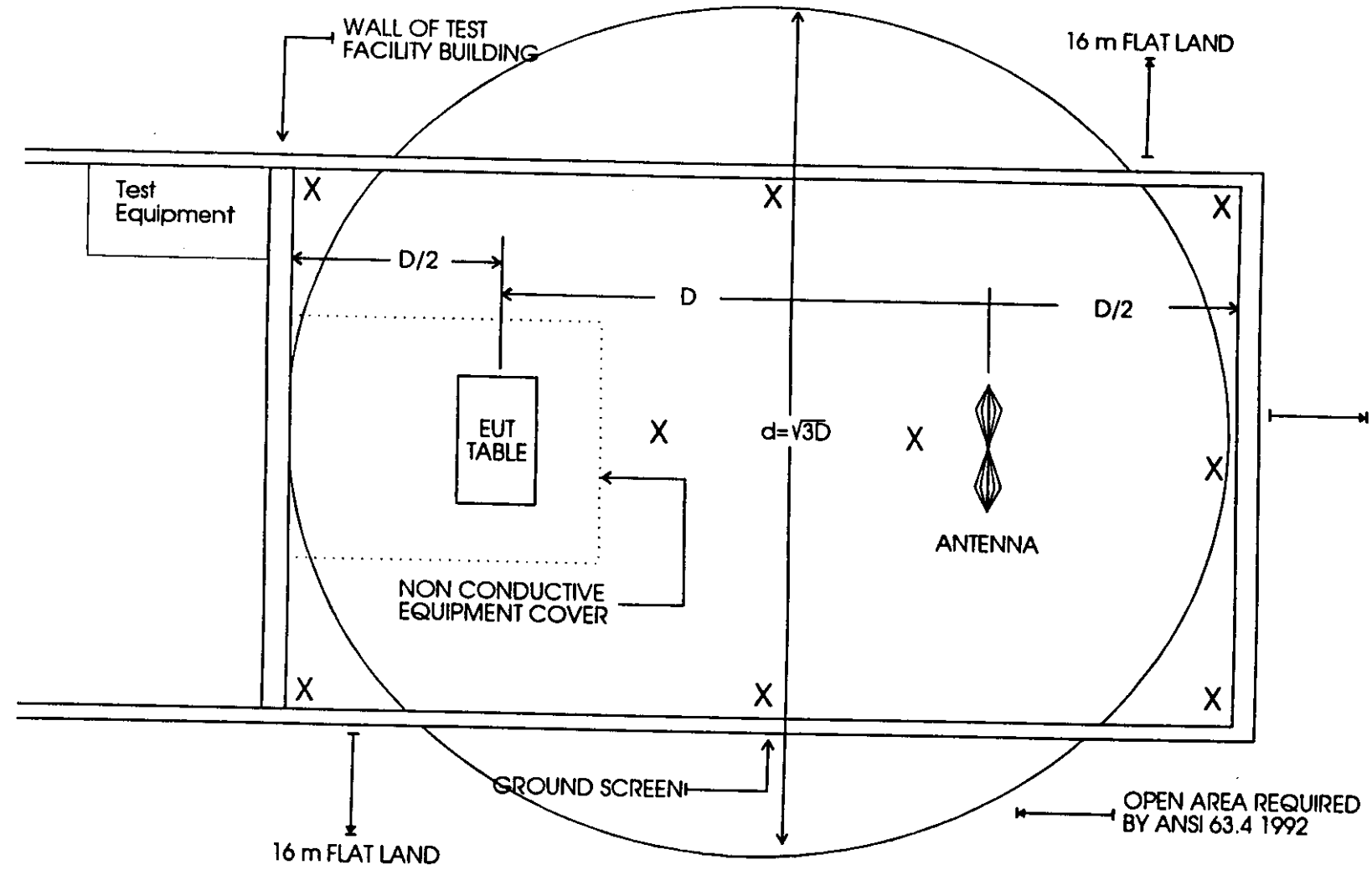
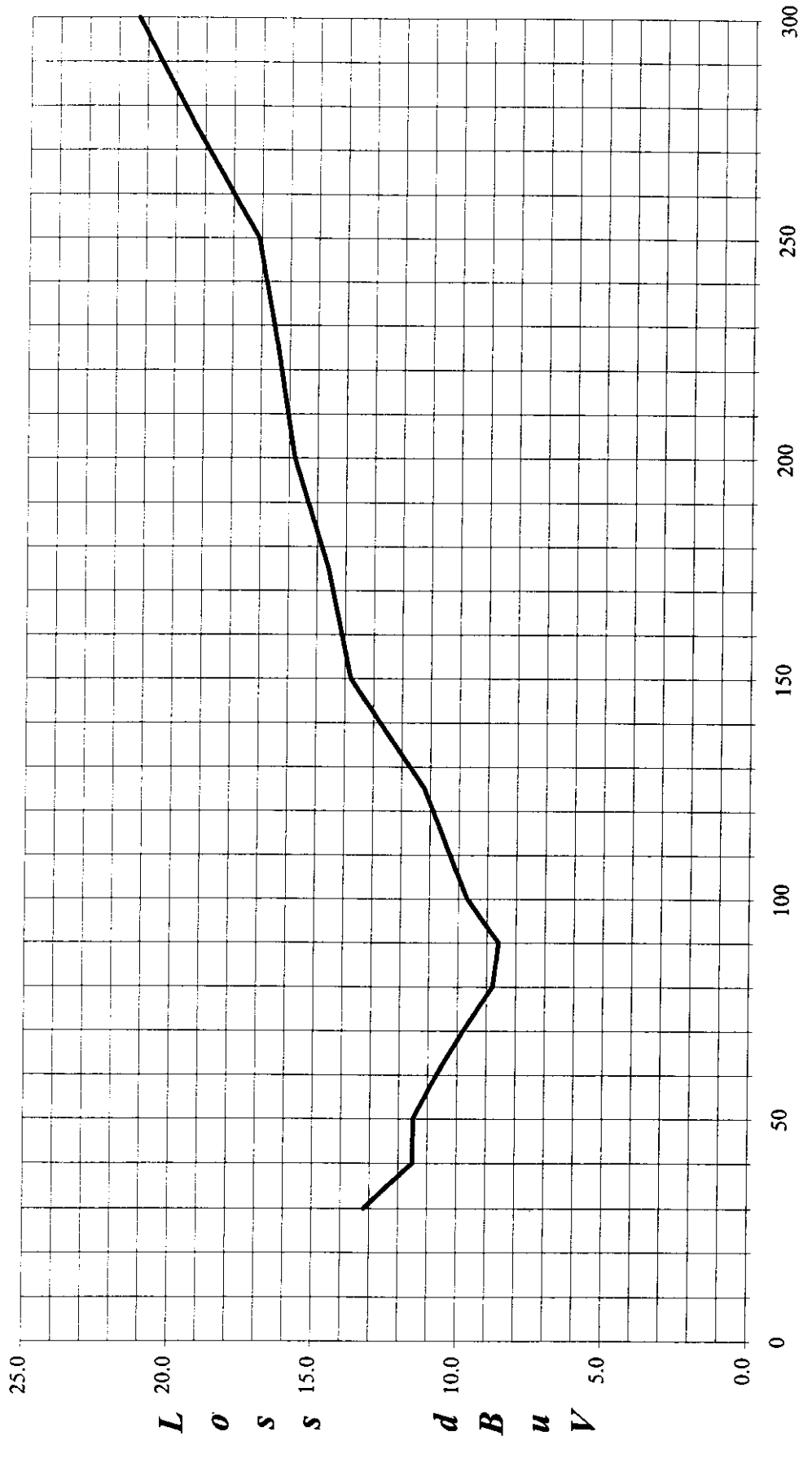



Figure 2: Plot Map and Layout of Test Site "D"

**APPENDIX B**

# *ANTENNA FACTORS AND EFFECTIVE GAIN FACTORS*

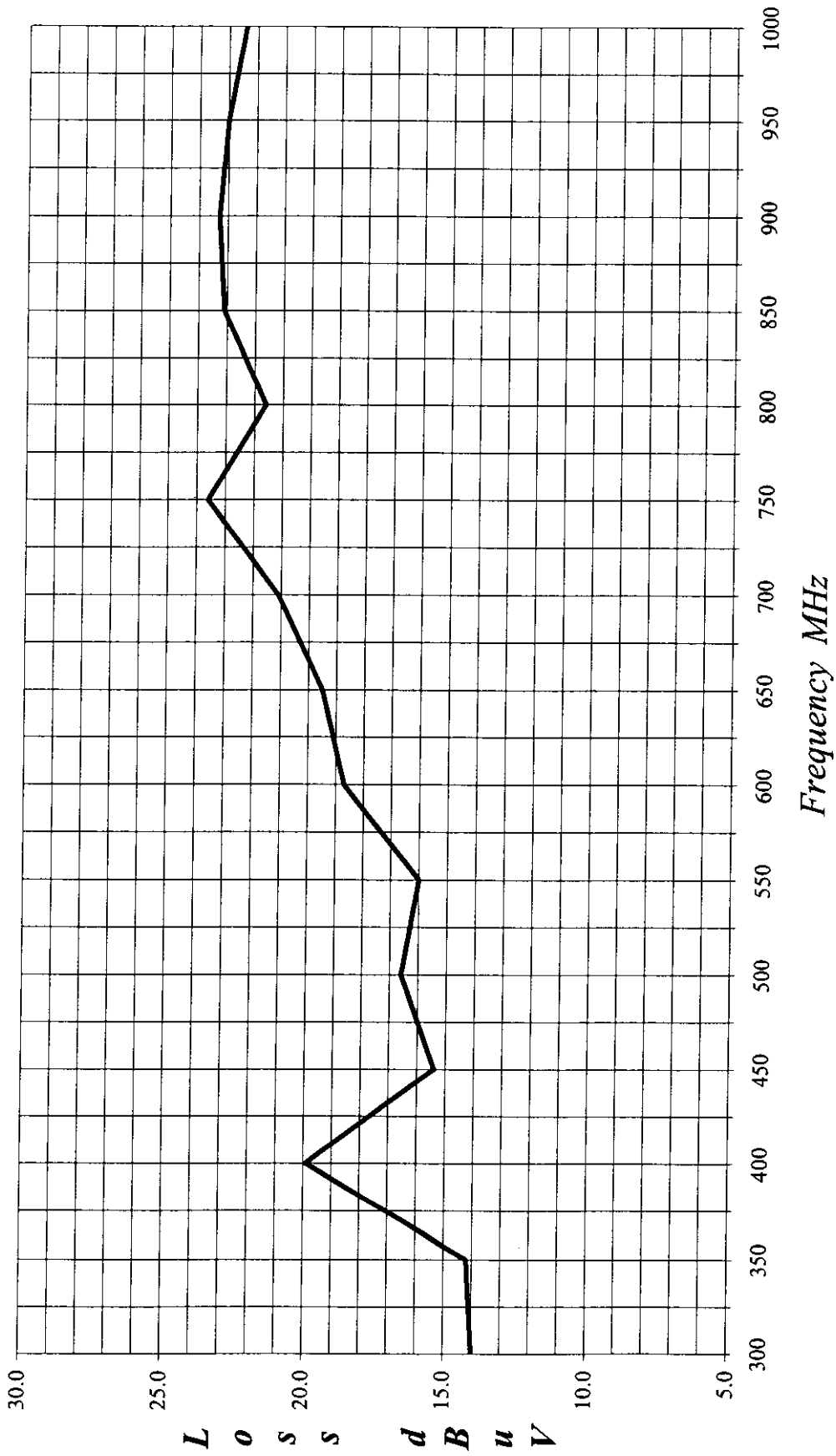
# LAB "D" BICONICAL ANTENNA AB-100 S/N 01548




Cal: 3/24/98

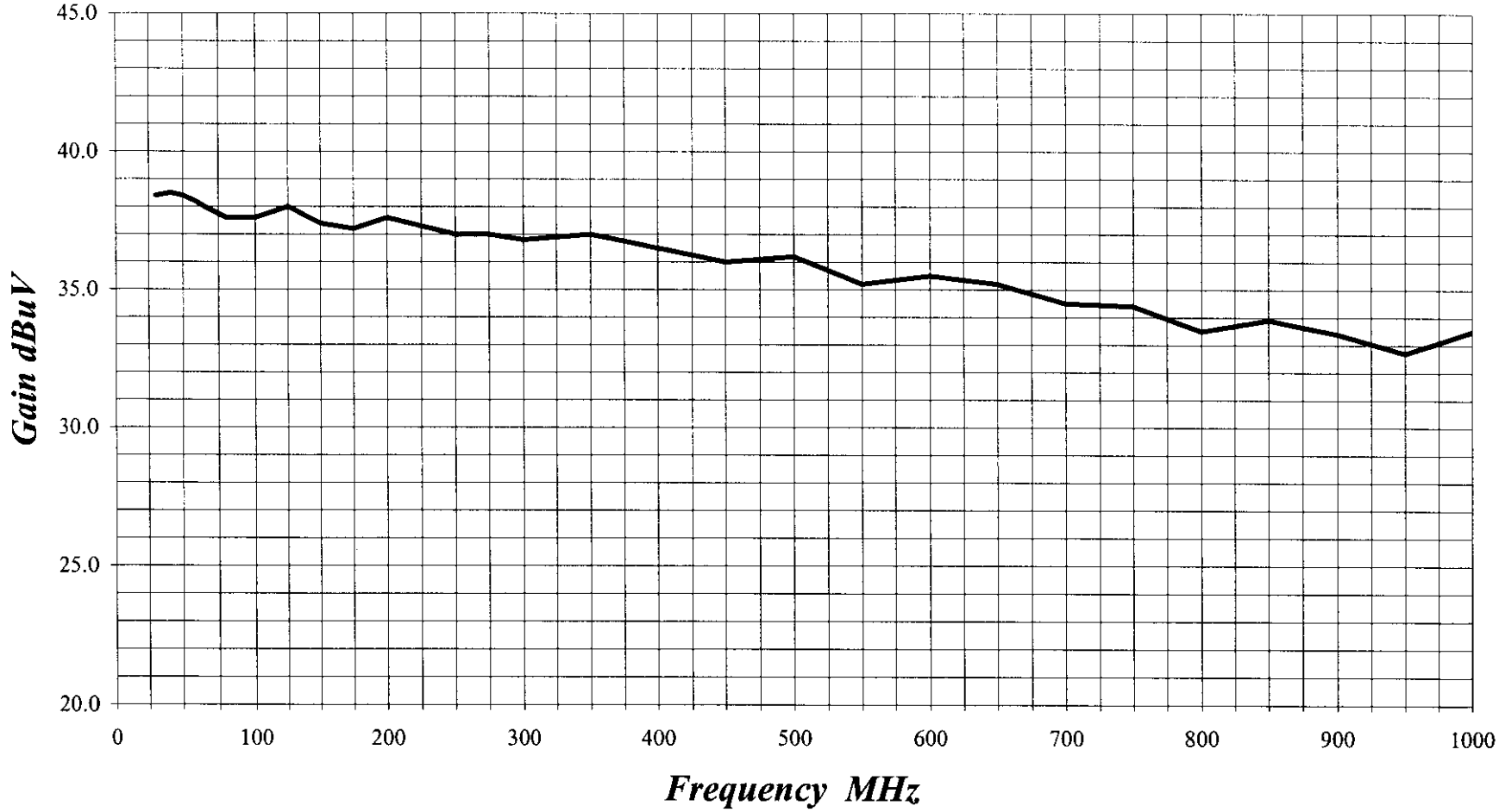
Cal: 2/13/98

# LAB "D" LOG PERIODIC ANTENNA AL-100 S/N 01012



RP-1

# *PREAMPLIFIER EFFECTIVE GAIN AT 3 METERS PA-102 S/N: 1017*




COMPATIBLE ELECTRONICS

# COM-POWER PA-122

# MICROWAVE PREAMPLIFIER

## S/N: 001

## CALIBRATION DATE: MARCH 31, 1998

| FREQUENCY (GHz) | FACTOR (dB) | FREQUENCY (GHz) | FACTOR (dB) |
|---|---|---|---|
| 1.0 | 33.0 | 8.0 | 31.4 |
| 1.1 | 33.0 | 8.5 | 30.5 |
| 1.2 | 32.9 | 9.0 | 31.4 |
| 1.3 | 32.9 | 9.5 | 32.6 |
| 1.4 | 32.8 | 10.0 | 33.1 |
| 1.5 | 32.7 | 10.5 | 32.1 |
| 1.6 | 33.0 | 11.0 | 31.0 |
| 1.7 | 33.0 | 11.5 | 31.0 |
| 1.8 | 33.1 | 12.0 | 30.9 |
| 1.9 | 32.9 | 12.5 | 30.9 |
| 2.0 | 33.1 | 13.0 | 30.4 |
| 2.5 | 32.7 | 13.5 | 31.0 |
| 3.0 | 32.4 | 14.0 | 29.3 |
| 3.5 | 32.1 | 14.5 | 28.5 |
| 4.0 | 31.8 | 15.0 | 27.6 |
| 4.5 | 31.5 | 15.5 | 27.6 |
| 5.0 | 31.6 | 16.0 | 27.3 |
| 5.5 | 32.0 | 16.5 | 29.3 |
| 6.0 | 31.6 | 17.0 | 30.4 |
| 6.5 | 32.0 | 17.5 | 31.1 |
| 7.0 | 31.4 | 18.0 | 29.7 |
| 7.5 | 32.0 | 18.5 | 29.3 |

ANTENNA RESEARCH ASSOCIATES, INC.
11317 Frederick Avenue, Beltsville, MD 20705

## E-FIELD ANTENNA FACTOR CALIBRATION

**E(dB V/m) = Vo(dB V) + AFE(dB/m)**

**Model number : DRG-118/A**

| Frequency GHz | AFE dB/m | Gain dBi |
|---|---|---|
| 1 | 22.3 | 8.0 |
| 2 | 26.7 | 9.5 |
| 3 | 29.7 | 10.1 |
| 4 | 29.5 | 12.8 |
| 5 | 32.3 | 12.0 |
| 6 | 32.4 | 13.4 |
| 7 | 36.1 | 11.0 |
| 8 | 37.4 | 10.9 |
| 9 | 36.8 | 12.5 |
| 10 | 39.5 | 10.7 |
| 11 | 39.6 | 11.5 |
| 12 | 39.8 | 12.0 |
| 13 | 39.7 | 12.8 |
| 14 | 41.8 | 11.3 |
| 15 | 41.9 | 11.9 |
| 16 | 38.1 | 16.3 |
| 17 | 41.0 | 13.9 |
| 18 | 46.5 | 8.9 |

Serial number : 1053
Job number : 96-092
Remarks : 3 meter calibration
Standards : LPD-118/A, TE-1000

Temperature : 72° F
Humidity : 56 %
Traceability : A01887
Date : December 08, 1995

Calibrated By

# Com-Power Corporation

(714) 587-9800

**Antenna Calibration**

| | |
|---|---|
| Antenna Type: | Loop Antenna |
| Model: | AL-130 |
| Serial Number: | 25309 |
| Calibration Date: | 2/5/98 |

| Frequency MHz | Magnetic (dB/m) | Electric dB/m |
|---|---|---|
| 0.01 | -40.5 | 11.0 |
| 0.02 | -41.6 | 9.9 |
| 0.03 | -40.0 | 11.5 |
| 0.04 | -40.3 | 11.2 |
| 0.05 | -41.6 | 9.9 |
| 0.06 | -41.1 | 10.4 |
| 0.07 | -41.3 | 10.2 |
| 0.08 | -41.6 | 9.9 |
| 0.09 | -41.7 | 9.8 |
| 0.1 | -41.8 | 9.7 |
| 0.2 | -44.0 | 7.5 |
| 0.3 | -41.6 | 9.9 |
| 0.4 | -41.7 | 9.8 |
| 0.5 | -41.7 | 9.8 |
| 0.6 | -41.5 | 10.0 |
| 0.7 | -41.5 | 10.0 |
| 0.8 | -41.6 | 9.9 |
| 0.9 | -41.6 | 9.9 |
| 1 | -41.1 | 10.4 |
| 2 | -40.7 | 10.8 |
| 3 | -40.7 | 10.8 |
| 4 | -40.9 | 10.6 |
| 5 | -40.1 | 11.4 |
| 6 | -40.0 | 11.5 |
| 7 | -40.3 | 11.2 |
| 8 | -39.8 | 11.7 |
| 9 | -38.8 | 12.7 |
| 10 | -40.8 | 10.7 |
| 12 | -41.4 | 10.1 |
| 14 | -41.4 | 10.1 |
| 15 | -40.9 | 10.6 |
| 16 | -40.8 | 10.7 |
| 18 | -41.5 | 10.0 |
| 20 | -41.5 | 10.0 |
| 25 | -41.2 | 10.3 |
| 30 | -41.4 | 10.1 |

| | |
|---|---|
| Trans. Antenna Height | 2 meter |
| Receiving Antenna Height | 2 meter |

# APPENDIX C

# *MODIFICATIONS TO THE EUT*

# MODIFICATIONS TO THE EUT

The modification listed below were made to the EUT to pass FCC 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.

Modifications:

1) Changed the Inductors on the power input to ferrites with 2 ½ turns on them. (FairRite P/N: 2943666651)

S.MEGGA
TELECOMMUNICATIONS LIMITED

18 June, 1998

Federal Communications Commission
Common Carrier Domestic Services
P.O. Box 358145
Pittsburgh, PA 15251-515

| | |
|---|---|
| Subject: | Modification to pass FCC Part 15 |
| Model: | SKYHAWK98 |
| FCC ID: | CLHSKYHAWK98 |

Dear Sirs,

The following modifications were added during compliance testing, and will be implemented into all production models of this equipment.

1) Changed the inductors on the power input lines to ferrites with 2 ½ turns. (Fair-Rite P/N: 2943666651).

If you have any questions or need any additional information, please feel free to call me at (852) 2614-1111.

Sincerely,

Jackson Man
Chief Engineer
S. Megga Telecommunications Ltd.

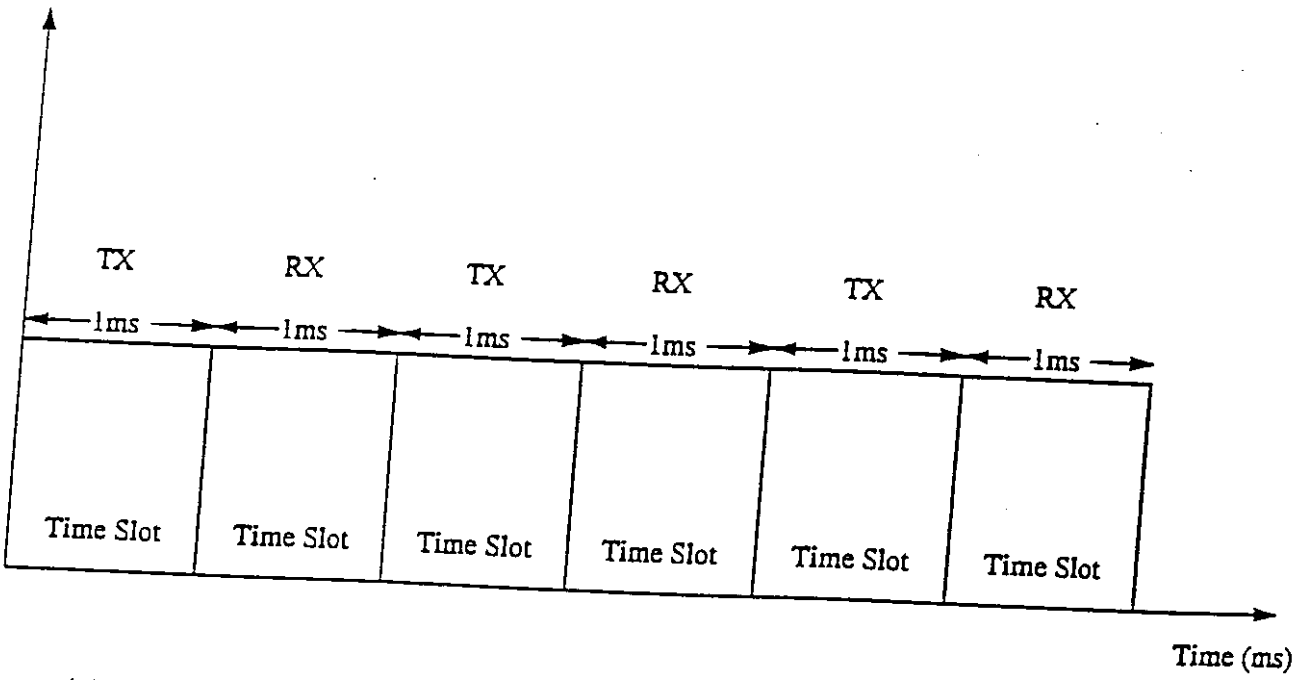
# EXHIBIT 7

SCHEMATICS AND DUTY CYCLE INFORMATION

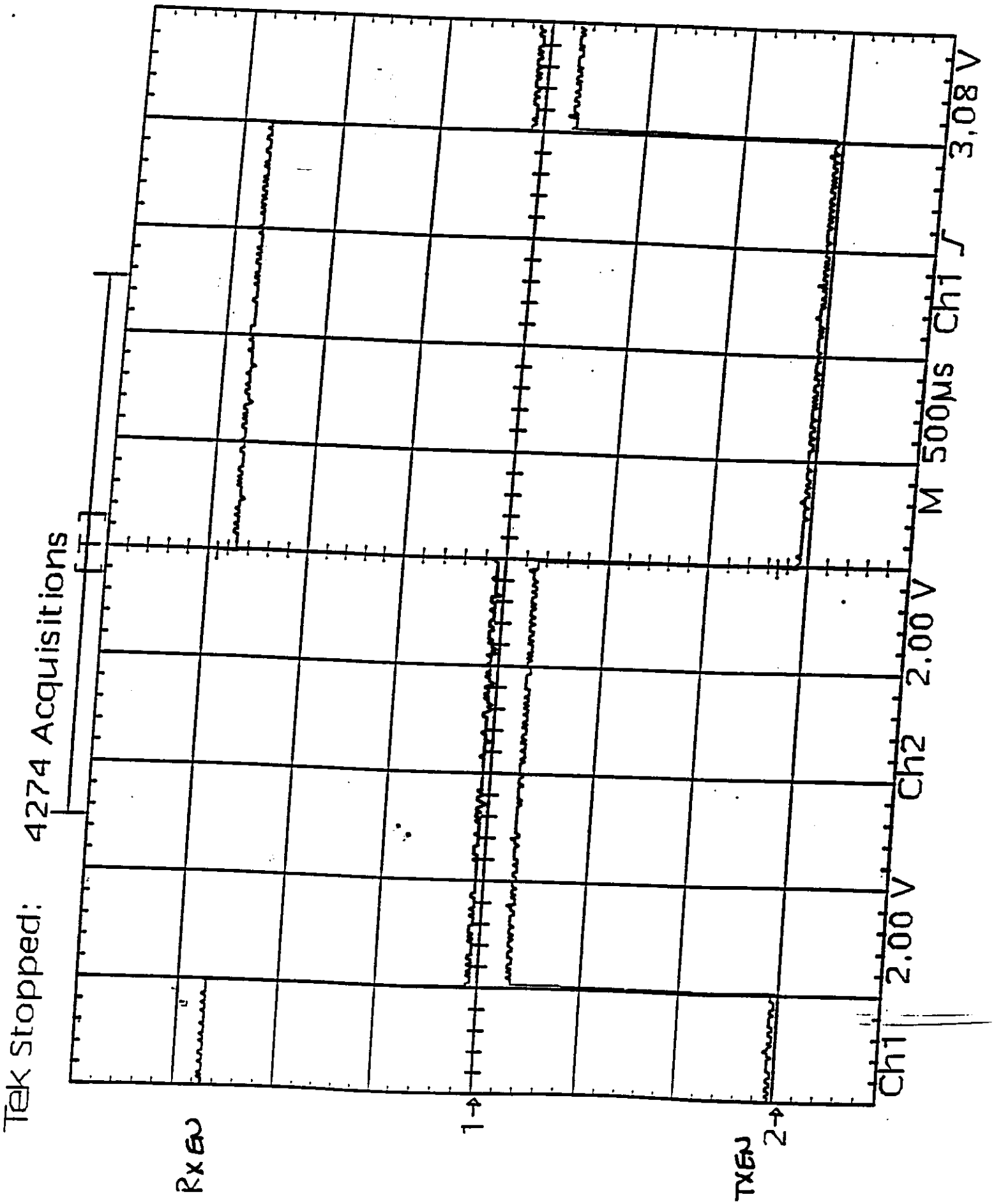
# TDD 50% DUTY SYSLE

**FCC ID: CLHSKYHAWK98**

The RF Modem architecture is a direct conversion transceiver. For transmit analog wave shaped baseband data is BPSK modulated directly to the carrier frequency. For receive, the carrier is directly converted to analog baseband in-phase and quadrature data signals. The DCT uses Time Division Duplexing (TDD) 50% duty cycle to channelize the transmit and receive data. The transmit time slot is 1ms wide, and the receive time slot is also 1ms wide. The result in a 2ms TX/RX superframe 50% duty cycle.




50% DUTY CUCLE OF TRANSMIT AND RECEIVE


Tek Stopped: 4274 Acquisitions
Ch1 2.00 V
Ch2 2.00 V
M 500µs Ch1 ƒ 3.08 V
1→
2→
RX 6V
TX 6V