



**APPLICATION FOR CERTIFICATION
FOR A**

Handheld Transmitter



Lab Code: 200587-0



**PER FCC 47: Part 15 Subpart C
(15.231)**

#ELA 115

**EH Enterprises
3747 Monroe Street
Riverside, CA 92504**

FCC ID: SGTHT-100

REPORT #: RV48148A

Prepared By

**DNB Engineering, Inc.
5969 Robinson Ave
Riverside CA, 92503**

**On
20 Aug 2004**



TEST LAB PERSONNEL

| Test Performed by: | Date | Signature |
|---------------------------|-------------|------------------|
| Thomas Elders | 20 Aug 2004 | |

APPROVALS

| Management Approval | Date | Signature |
|--------------------------------------|-------------|------------------|
| Les Payne Sr. Engineering Manager | 20 Aug 2004 | |

Document History

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1 ADMINISTRATIVE DATA

1.1 Certifications and Qualifications

I certify that DNB Engineering, Inc conducted the tests performed in order to obtain the technical data presented in this application. Also, based on the results of the enclosed data, I have concluded that the equipment tested meets or exceeds the requirements of the Rules and Regulations governing this application.

DNB Engineering's Riverside 3 and 10 meter sites have been registered with the Federal Communication Commission per the requirements of Section 2.948 of the FCC Rules:

FCC Registration No. 99985

1.2 Measurement Reputability Information

The test data presented in this report has been acquired using the guidelines set forth in FCC Part 2.1031 through 2.1057, and were applicable to Part 15 (see sec Test Data Required for specifics). The test results presented in this document are valid only for the equipment identified herein under the test conditions described. Repeatability of these test results will only be achieved with identical measurement conditions. These conditions include: The same test distance, EUT Height, Measurement Site Characteristics, and the same EUT System Components. The system must have the same Interconnecting Cables arranged in identical placement to that in the test set-up, with the system and/or EUT functioning in the identical mode of operation (i.e. software and so on) as on the date of the test. Any deviation from the test conditions and the environment on the date of the test may result in measurement repeatability difficulties.

All changes made to the EUT during the course of testing as identified in this test report must be incorporated into the EUT or identical models to ensure compliance with the FCC regulations.

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1.3 Test Methodology

The tests were performed in accordance with FCC Part 2 Subpart J,

- 2.1047 Modulation characteristics See Sec3.5 of report
- 2.1049 Occupied Bandwidth See Sec3.6 of report
- 2.1053 Field Strength of Spurious Emissions See Sec3.8 of report
- 2.1055 Frequency Stability See Sec3.9 of report

1.4 Test Equipment Used

Figure 1: Test Equipment

| Description | Manufacturer | M/N | S/N | Cal Date | Test Used On |
|---------------------------|--------------|--------|------------|----------|----------------------------------------------------------|
| Signal Generator | Agilent | E4432B | N/A | 2/17/05 | RF Power Out put, Emissions Lim, Cond Spur, Rad Spur, CE |
| Spectrum Analyzer Display | H/P | 85662A | 2403A06307 | 01/10/05 | RF Power Out put, Emissions Lim, Cond Spur, Rad Spur, CE |
| Spectrum Analyzer | H/P | 8566B | 2407A03212 | 01/10/05 | RF Power Out put, Emissions Lim, Cond Spur, Rad Spur, CE |



1.5 Deviations

Deviations/Modifications to the EUT

None

Deviations/Modifications from test standard.

None



1.6 Test Description 2.1033 (b) (6)

1.6.1 Modulation Characteristics Per 2.1047

A curve or equivalent data which shows that the equipment will meet the modulation requirements of the rules under which the equipment is to be licensed.

1.6.2 Occupied Bandwidth Per 2.1049

1.6.3 Field Strength of Spurious radiation Per 2.1053

Measurements shall be made to detect spurious emissions that may be radiated directly from the cabinet, control circuits, power leads, or intermediate circuit elements under normal conditions of installation and operation. Curves or equivalent data shall be supplied showing the magnitude of each harmonic and other spurious emission. For this test, single sideband, independent sideband, and controlled carrier transmitters shall be modulated under the conditions specified in paragraph (c) of Sec. 2.1049, as appropriate. For equipment operating on frequencies below 890 MHz, an open field test is normally required, with the measuring instrument antenna located in the far-field at all test frequencies. In the event it is either impractical or impossible to make open field measurements (e.g. a broadcast transmitter installed in a building) measurements will be accepted of the equipment as installed. Such measurements must be accompanied by a description of the site where the measurements were made showing the location of any possible source of reflections which might distort the field strength measurements. Information submitted shall include the relative radiated power of each spurious emission with reference to the rated power output of the transmitter, assuming all emissions are radiated from halfwave dipole antennas.

1.6.4 Frequency Stability

Per 2.1055

The frequency stability shall be measured with variation of ambient temperature and/or supply voltage.

For ambient temperature frequency measurements shall be made at the extremes of the specified temperature range and at intervals of not more than 10° centigrade through the range. A period of time sufficient to stabilize all of the components of the oscillator circuit at each temperature level shall be allowed prior to frequency measurement. The short term transient effects on the frequency of the transmitter due to keying (except for broadcast transmitters) and any heating element cycling normally occurring at each ambient temperature level also shall be shown. Only the portion or portions of the transmitter containing the frequency determining and stabilizing circuitry need be subjected to the temperature variation test.

For supply voltage for hand carried, battery powered equipment, reduce primary supply voltage to the battery operating end point which shall be specified by the manufacturer.



2 APPLICATION FOR CERTIFICATION

2.1033 (b) 1 Name of Applicant:

EH Enterprises
3747 Monroe Street
Riverside, CA 92504

FRN:

Applicant is:

Manufacturer
 Vendor
 Licensee
 Prospective Licensee
 Other

Name of Manufacturer

EH Enterprises

Description:

Handheld Transmitter

Part Number:

HHT-10x (where "x" can be from 1-9)

Anticipated Production Quantity:

Multiple Units

Applicable FCC Parts:

15.231

Operating Frequency:

418 MHz

2.1033 (b) 2 FCC ID No:

SGTHT-100

2.1033 (b) 3: Instructions:

Operator Instructions for the HHT-107

By E H Enterprises, Riverside, CA
 Thursday, August 22, 2002

The HHT-107 Hand Held Transmitter is a device which is designed to control various other devices by means of a radio signal sent when one of up to seven buttons on the front panel is pushed.

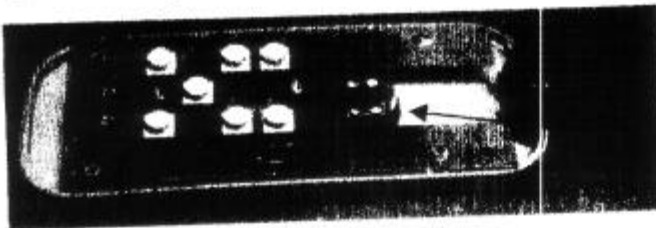
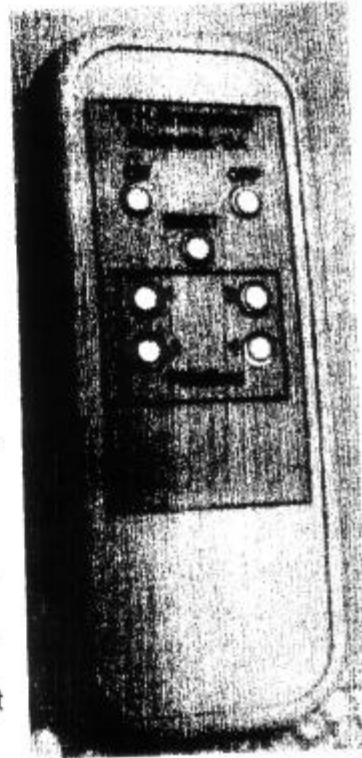
The HHT-100 series of HHT's consists of various combinations of buttons but basically the same circuitry. The HHT-107 is the most complex with the buttons placed as shown in the photo at the right. It can be purchased with as few as two buttons but no more than seven.

It sends a code using a small transmitter near the top of the unit with an antenna running down on the inside of the housing, so no external antenna is needed.

There is an eight position switch block inside which can be used for addressing with eight different combinations for a total of 256 different addresses.

It uses a standard 9 vdc battery, readily available at any hardware store. It is accessed by removing four screws on the rear and lifting out the battery.

CAUTION: When replacing the battery, make sure that the positive connection on the battery coincides with the positive terminal on the printed circuit board.



Make certain that this Positive terminal Connects with

This terminal.

The battery is installed easiest by putting the bottom of the battery against the sponge rubber first then pressing it into the space where the two contacts are.

The eight position switch block on the rear of the pc board shown above and is used to match the switch settings on the receiver unit. It allows for several of these units to be operated in the same general area and not interfere with each other. The receiver will respond only to the transmitter with a matching code.

Doc. 107-4-1204

2.1033 (b) 4 Brief Description:

The attached is a brief description of the radio module used in this equipment.

TRANSMITTERS

AM-RT4-xxx AM Transmitter Modules AM-RT5-xxx

FEATURES

- COMPLETE RF TRANSMITTER
- TRANSMIT RANGE UP TO 70m
- CMOS/TTL INPUT
- AVAILABLE IN DIL OR SIL PACKAGE
- NO ADJUSTABLE COMPONENTS
- VERY STABLE OPERATING FREQUENCY
- LOW CURRENT CONSUMPTION (TYP 4mA)
- LOW SPURIOUS EMISSIONS (-35dBc)
- WIDE OPERATING VOLTAGE (2-14V)
- AVAILABLE AS 418 MHz OR 433 MHz
- COMPATIBLE WITH AM-HRR1, AM-HRR3/6 AND THE AM-RSS2 AM RECEIVER MODULES

APPLICATIONS

- WIRELESS SECURITY SYSTEMS
- CAR ALARMS
- REMOTE GATE CONTROLS
- REMOTE SENSING
- DATA CAPTURE
- SENSOR REPORTING

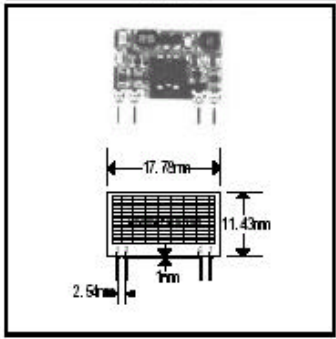
DESCRIPTION

Differing in package style, AM-RT4 and AM-RT5 AM hybrid transmitter modules provide complete RF transmitters which can be used to transmit data at up to 4 kHz from any standard CMOS/ TTL source.

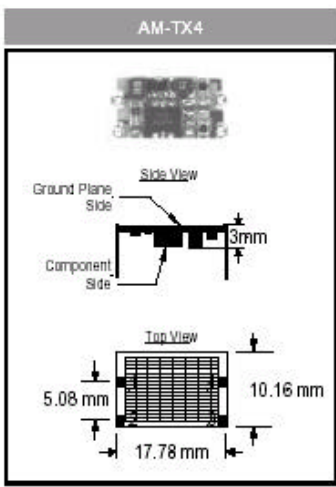
The modules are very simple to integrate into a design and offer low current consumption (typ. 4 mA). Data can be supplied directly from a microprocessor or data encoding device to the data input of the modules. The modules exhibit extremely stable electronic characteristics due to the use of 'Thick-Film' hybrid technology. They use no adjustable components resulting very reliable operation.

The AM-RT4 and AM-RT5 modules are compatible with all ABACOM Technologies' range of AM receivers to complete the RF data link.

AM-TX5



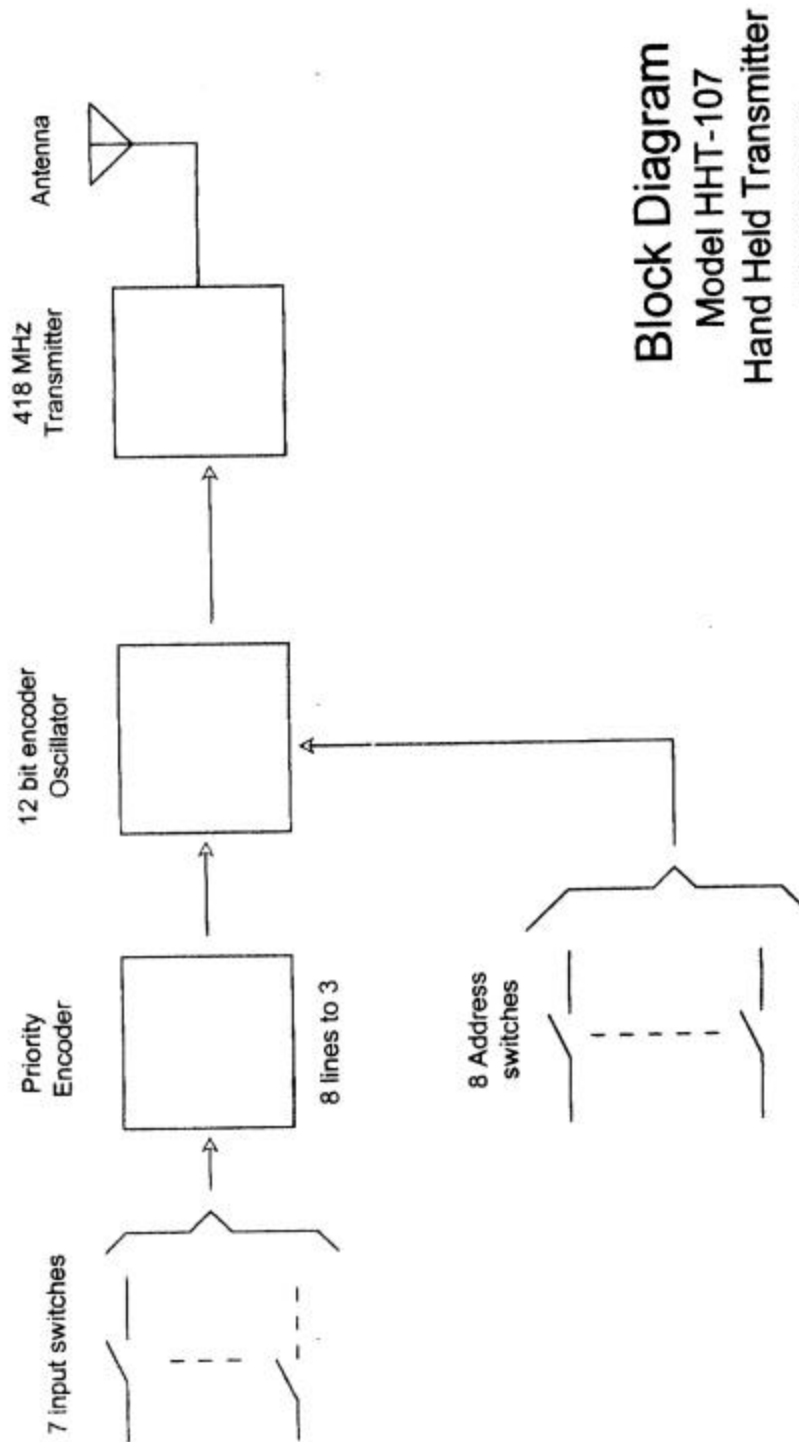
AM-TX4



| RT4 Pin | RT5 Pin | DESCRIPTION |
|---------|---------|-------------------|
| 1 | 1 | Vcc Supply |
| 2 | 2 | Ground, RF Ground |
| 3 | 6 | Data IN |
| 4 | 7 | External Antenna |

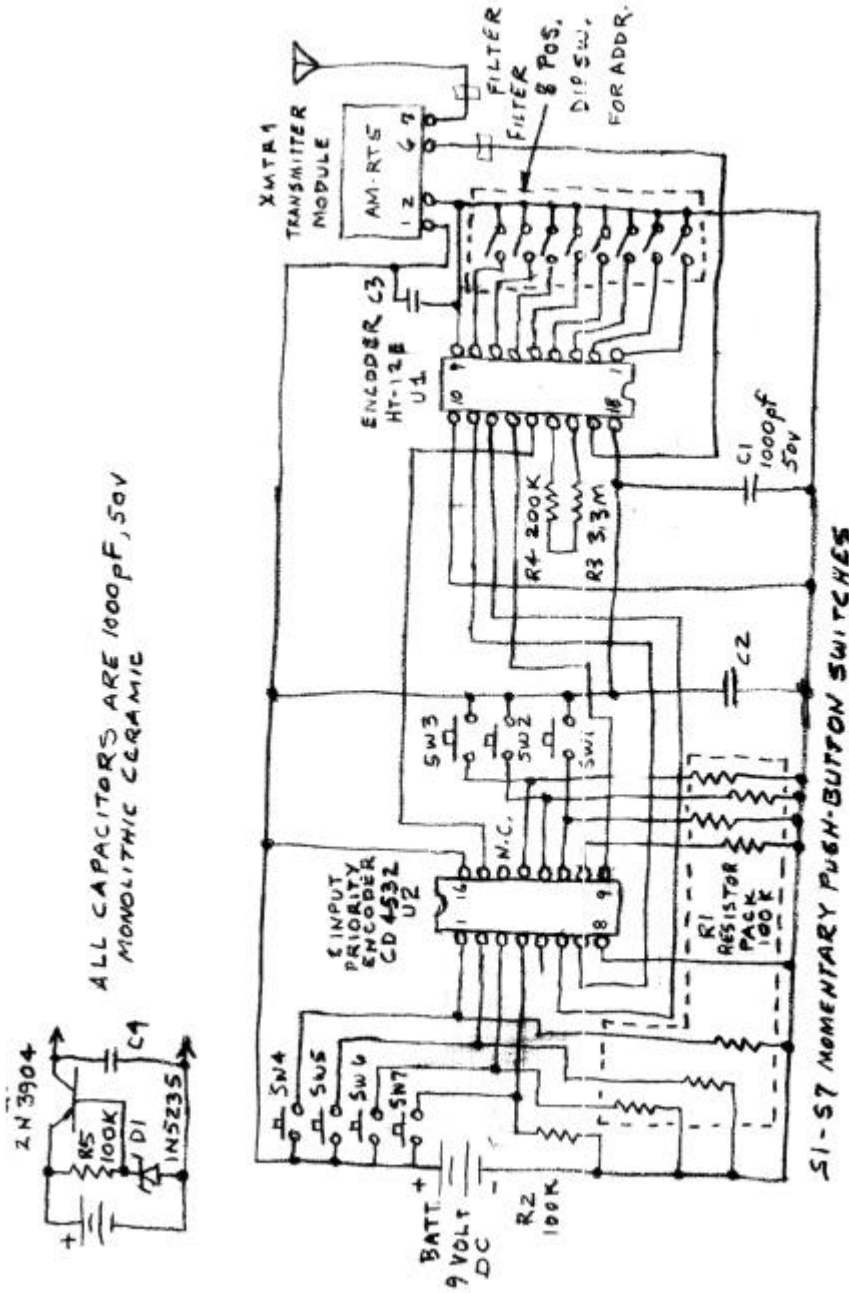


2.1033 (b) 5 Block Diagram:



Block Diagram
Model HHT-107
Hand Held Transmitter
E H Enterprises
Riverside, CA

Schematics:



Schematic:
 MODEL HMT-107
 HAND HELD TRANSMITTER

E H Enterprises
 RIVERSIDE, CALIFORNIA



2.1033 (b) 6 Report of Measurements:



Test Result Summary

Figure 2: Test Result Summary

| NAME OF TEST | FCC PARA. NO. | RESULTS |
|-----------------------------------------------|----------------------|----------------|
| Modulation Characteristics | 2.1047 | Complies |
| Occupied Bandwidth: | 2.1049 | Complies |
| Radiated Field Strength of Spurious Emissions | 2.1053 | Complies |
| Frequency Stability | 2.1055 | Complies |

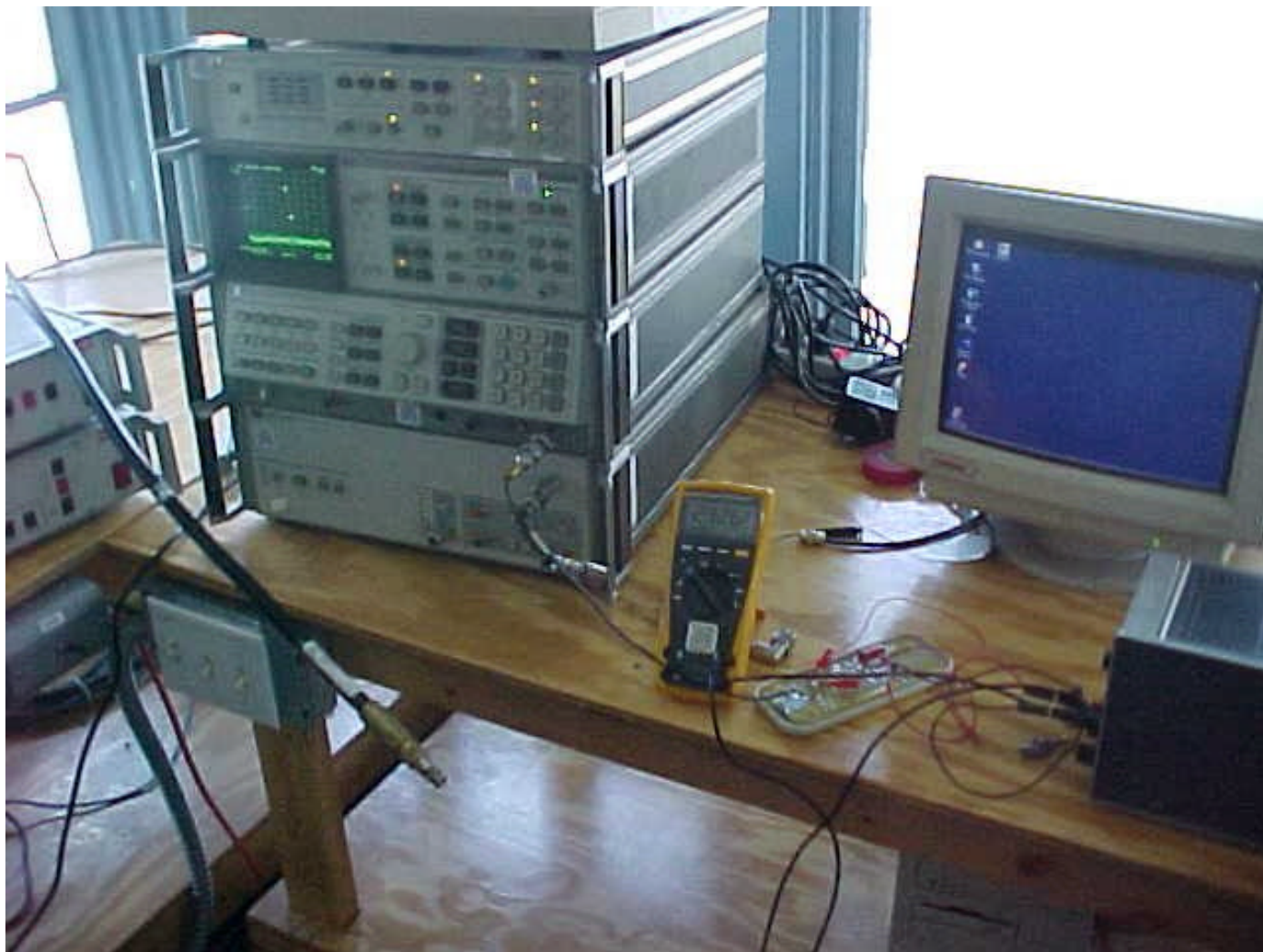
3.1.2 Frequency Spectrum Investigated

Per 2.1057

In all of the measurements set forth in Secs. 2.1051 and 2.1053, for equipment operating below 10 GHz, the spectrum shall be investigated from the lowest radio frequency signal generated in the equipment, without going below 9 kHz, to the tenth harmonic of the highest fundamental frequency or to 40 GHz, whichever is lower.

Test Setup Photo

Frequency Stability: Voltage



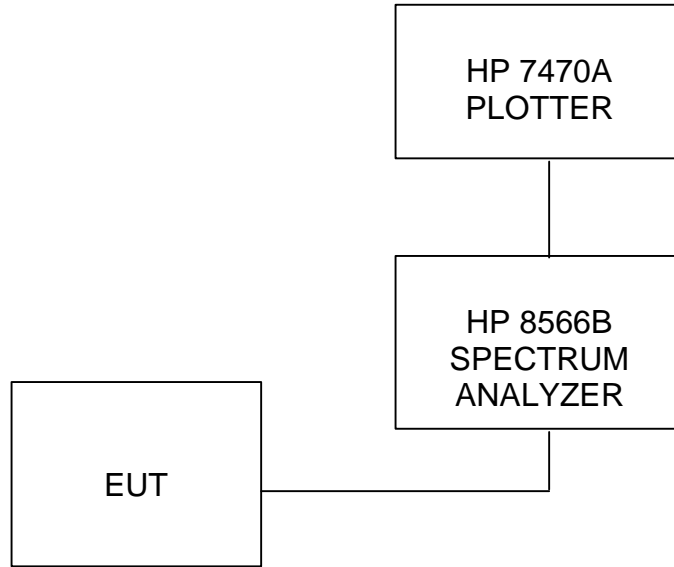
Frequency Stability: Temperature





Test Block Diagram

Figure 3: Test Set up Block Diagram for Occupied Bandwidth





Modulation Characteristics

Per 2.1047

Definition:

A curve or equivalent data which shows that the equipment will meet the modulation requirements of the rules under which the equipment is to be licensed.

EUT was operated by depressing one of the keys continuously. Each key depressed is a sequence of pulses (long and short) which is used to turn on and off various switches.

Test Results: See Plots



Figure 4: Modulation Characteristics

| Modulation Characteristics | | | |
|-----------------------------------|----------------------|--------------------|--------------------------------------------------------|
| DNB Job Number: | RV48148A | Date: 17 June 2004 | Conformance Standards FCC Part 2.1047 Part |
| Customer: | EH Enterprises | | |
| Model Number: | HHT-107 | Serial Number: n/a | |
| Description: | Handheld Transmitter | | |
| | | | |
| | | | |

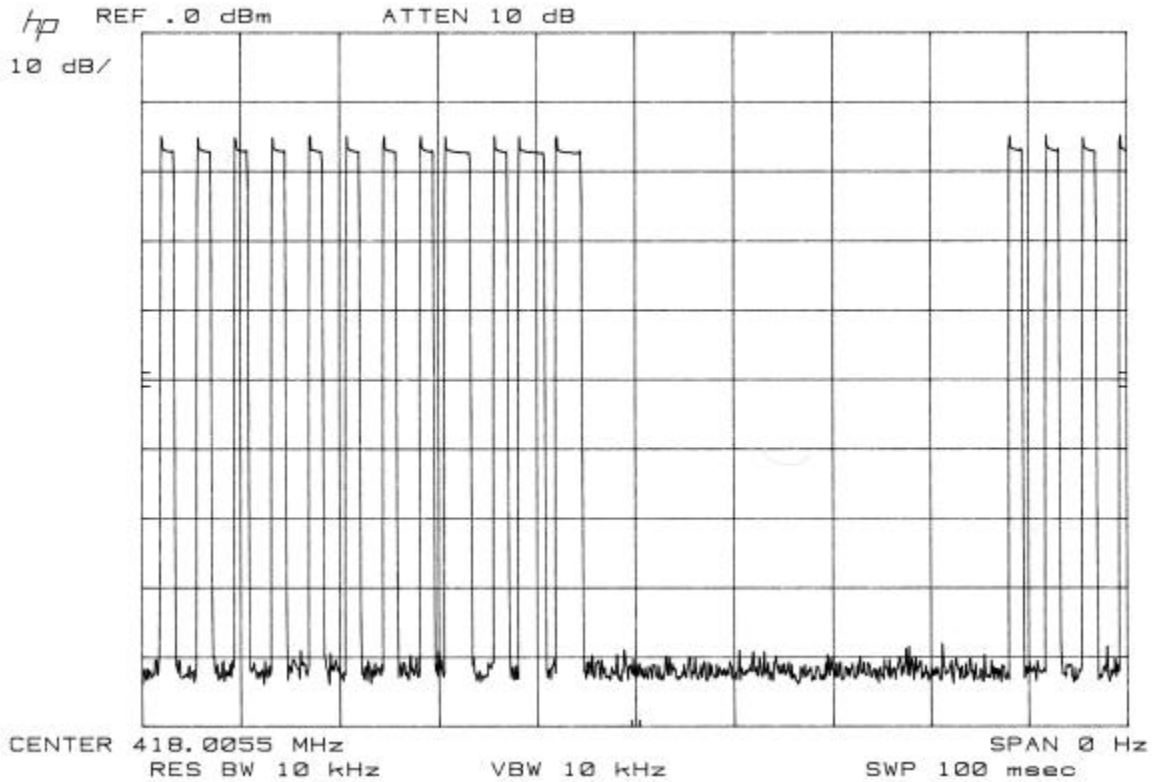




Figure 4: Modulation Characteristics

| | | Duty Cycle Correction | |
|-----------------|----------------------|------------------------------|---------------------------------------------------------------------------------------|
| DNB Job Number: | RV48148A | Date: 17 June 2004 | Conformance Standards FCC Part 2.1047 Part 15(c) |
| Customer: | EH Enterprises | | |
| Model Number: | HHT-107 | Serial Number: n/a | |
| Description: | Handheld Transmitter | | |
| | | | |

1. There are 13 short pulses with a on time of 1.4mS per 100mS time frame
2. There are 3 long pulses with an on time of 2.7mS per 100 mS time frame
3. Total on time per 100mS is (13 * 1.4mS)+(3 * 2.7mS) = 26.3mS
4. Duty cycle correction faction is $10\text{Log}(\text{on time} / 100\text{mS})$
5. $10 \text{ Log} (26.3\text{mS} / 100\text{mS}) = -5.8\text{dB}$
6. Duty Cycle Correction factor calculated into the readings on the applicable datasheets.



7. Occupied Bandwidth
Per 2.1049

Definition:

Occupied Bandwidth, that is the frequency bandwidth such that, below its lower and above its upper frequency limits, the mean powers radiated are equal to 0.5 percent of the total mean power radiated by a given emission.

Test Method:

Connect the Equipment per FIGURE 3.

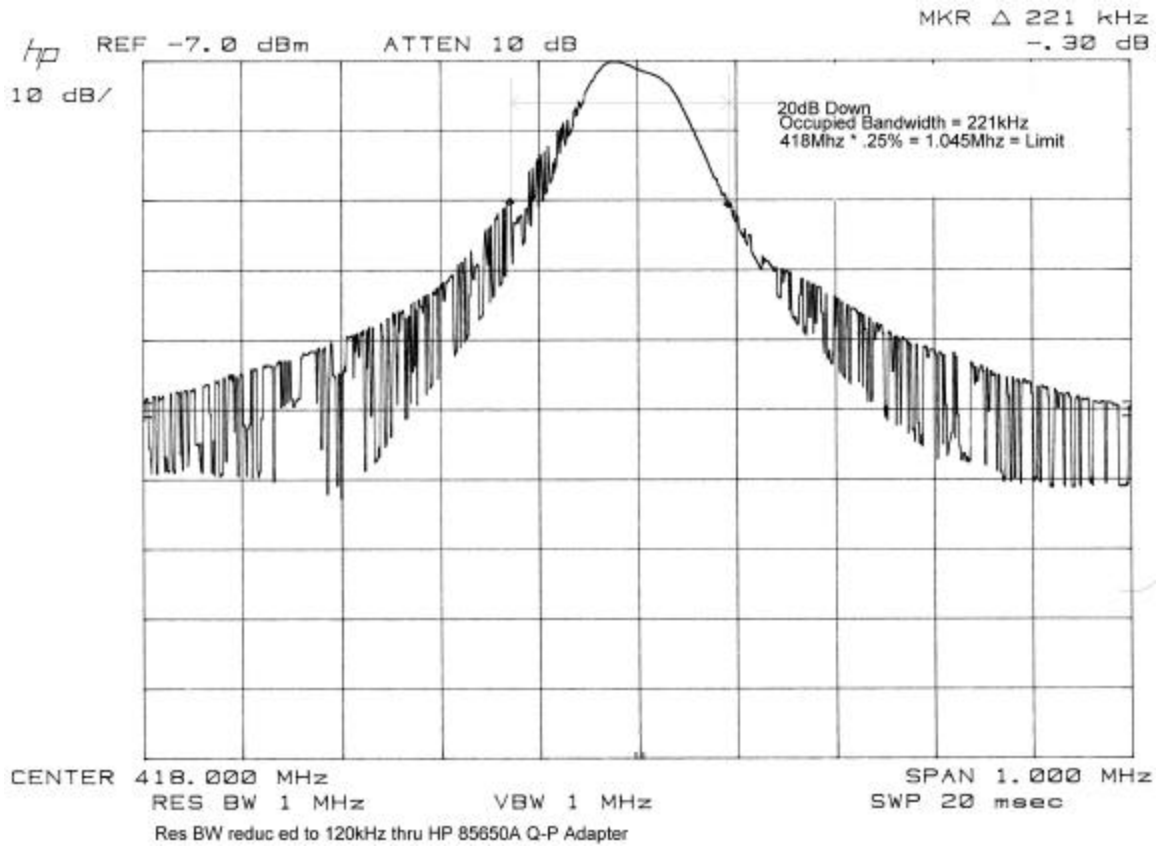
Measurements were made while modulating the driving source with specified modulations.

Test Results: See Plots



Figure 5: Occupied Bandwidth

| Occupied Bandwidth | | | |
|--------------------|----------------------|--------------------|-----------------------------------------------------|
| DNB Job Number: | RV48148A | Date: 17 June 2004 | Conformance Standards FCC Part 2.1049 Part |
| Customer: | EH Enterprises | | |
| Model Number: | HHT-107 | Serial Number: n/a | |
| Description: | Handheld Transmitter | | |
| | | | |
| | | | |





3.6 Field Strength of Spurious Radiation

3.7

Per 2.1053

Definition:

Emissions from the equipment when connected into a non-radiating load on a frequency or frequencies which are outside an occupied band sufficient to ensure transmission of information of required quality for the class of communication desired. The reduction in the level of these spurious emissions will not affect the quality of the information being transmitted.

Test Method: In Accordance with FCC Part 15 and CISPR 22

The EUT was placed on a wooden table 1 meter wide and 1.5 meters long, which rests on a inground turntable 3 meter open area test site test site. The top of the table is 80 cm above the ground plane. The turntable can be rotated 360 degrees. Measuring antenna is set at the prescribed distance. (Measurements are made with broad band antennas that have been correlated with tuned dipole antennas). The mast is 6 meters high and is self-supporting. The height of the antenna can be varied from 1 to 4 meters. Positioning of the antenna is controlled remotely.

The spectrum analyzer is setup to store the peak emission over the band of the antenna. Peak EUT and ambient emissions are stored while the turntable is rotated 360°. Peak spectrum analyzer trace is then recorded with the addition of antenna and cable correction factors. The limit is recorded on the same graph. A receiver with CISPR Quasi Peak capabilities is then used on the frequencies identified as the highest with respect to the plotted limit. Ambience is noted on the graph along with EUT emissions. The highest EUT frequencies, with respect to the limit, are maximized.

To maximize emissions levels, the turntable is rotated and the antenna is raised and lowered to determine the point of maximum emanations. The cables are then manipulated at that point to maximize emissions. Measurements are made with the antennas in each horizontal and vertical polarization separately. The data obtained from these tests is corrected with the proper cable, preamplifier and antenna factors. The results are then transcribed onto tables that show the maximum emission levels. The highest emissions are listed in a Radiated Emissions Summary table.

If no emissions can be found, the lowest harmonics of the EUT clocks within the bands of the standard are tuned into with the receiver. If no emissions are found, the noise floor will be entered into the table and noted. A minimum of six frequencies will be logged. Summary results will reflect only actual emissions from the EUT.

The field intensity measurements are made using standard techniques with a spectrum analyzer or EMI receiver as the calibrated Field Intensity Meter (FIM). Preamplifiers and filters are used when required.



When using the Hewlett Packard Model 8566B Spectrum Analyzer as the FIM, the Analyzer is calibrated to read signal level in dBm. Where:

$$0 \text{ dBm (50 ohms)} = 107 \text{ dBuV (50 ohms)}$$

The signal level (dBuV) = indicated signal level (dBm) + 107 dB. To obtain the signal level in dBuV/m it is necessary to add the antenna factor in dB.

Test Results: All readings were at the spectrum analyzer ground floor above the fundamental.

All radiated spurious emissions are below the FCC Specifications.



Figure 6: Field Strength Spurious Radiation

| | | Field Strength of Spurious Radiation | |
|-----------------------------------------------------|----------------------------------------|---------------------------------------------|--------------|
| DNB Job Number: | RV48148A | Date: | 17 June 2004 |
| Customer: | EH Enterprises | | |
| Model Number: | HHT-107 | Serial Number: | n/a |
| Description: | Handheld Transmitter | | |
| | | | |
| | Antenna Horizontal Polarization | | |
| Conformance Standards FCC Part 2.1053 Part | | | |

| Freq | dBm | dBuV | D/C | CL | Amp | Ant | Corr | Limit | Delta | Polar | Table | Mast | Eut |
|---------|-------|------|------|------|-------|------|------|-------|-------|-------|-------|------|-----|
| 418.05 | -26.5 | 80.5 | -5.8 | 3.2 | -24.6 | 16.4 | 69.7 | 80.3 | -10.6 | H | 36 | 2.30 | H |
| 836.09 | -49.9 | 57.1 | -5.8 | 5.1 | -25.1 | 22.3 | 53.6 | 60.3 | -6.7 | H | 243 | 2.64 | H |
| 1254.03 | -42.5 | 64.5 | -5.8 | 7.2 | -31.9 | 24.4 | 58.4 | 60.3 | -1.9 | H | 0 | 2.37 | H |
| 1672.01 | -47.5 | 59.5 | -5.8 | 8.7 | -33.2 | 25.6 | 54.8 | 60.3 | -5.5 | H | 48 | 1.97 | H |
| 2089.95 | -71.0 | 36.0 | -5.8 | 10.0 | -31.3 | 27.6 | 36.5 | 60.3 | -23.8 | H | 253 | 1.25 | H |
| 2508.13 | -72.0 | 35.0 | -5.8 | 11.0 | -31.1 | 28.1 | 37.2 | 60.3 | -23.1 | H | 0 | 1.27 | H |
| 2926.19 | -72.0 | 35.0 | -5.8 | 11.8 | -31.2 | 30.2 | 40.0 | 60.3 | -20.3 | H | 250 | 1.94 | H |
| 3344.48 | -72.0 | 35.0 | -5.8 | 12.7 | -30.7 | 31.0 | 42.2 | 60.3 | -18.1 | H | 165 | 2.48 | H |
| 3762.38 | -72.0 | 35.0 | -5.8 | 13.6 | -30.4 | 32.1 | 44.5 | 60.3 | -15.8 | H | 64 | 1.51 | H |
| 4180.31 | -72.0 | 35.0 | -5.8 | 14.3 | -29.5 | 32.7 | 46.7 | 60.3 | -13.6 | H | 360 | 1.32 | H |
| | | | | | | | | | | | | | |
| 418.05 | -27.8 | 79.2 | -5.8 | 3.2 | -24.6 | 16.4 | 68.4 | 80.3 | -11.9 | H | 200 | 1.00 | V |
| 836.09 | -50.2 | 56.8 | -5.8 | 5.1 | -25.1 | 22.3 | 53.3 | 60.3 | -7.0 | H | 184 | 1.69 | V |
| 1254.03 | -43.0 | 64.0 | -5.8 | 7.2 | -31.9 | 24.4 | 57.9 | 60.3 | -2.4 | H | 182 | 1.66 | V |
| 1672.01 | -52.0 | 55.0 | -5.8 | 8.7 | -33.2 | 25.6 | 50.3 | 60.3 | -10.0 | H | 206 | 1.64 | V |
| 2089.95 | -72.0 | 35.0 | -5.8 | 10.0 | -31.3 | 27.6 | 35.5 | 60.3 | -24.8 | H | 0 | 1.25 | V |
| 2508.13 | -72.0 | 35.0 | -5.8 | 11.0 | -31.1 | 28.1 | 37.2 | 60.3 | -23.1 | H | 360 | 1.25 | V |
| 2926.19 | -72.0 | 35.0 | -5.8 | 11.8 | -31.2 | 30.2 | 40.0 | 60.3 | -20.3 | H | 0 | 1.25 | V |
| 3344.48 | -72.0 | 35.0 | -5.8 | 12.7 | -30.7 | 31.0 | 42.2 | 60.3 | -18.1 | H | 360 | 1.25 | V |
| 3762.38 | -72.0 | 35.0 | -5.8 | 13.6 | -30.4 | 32.1 | 44.5 | 60.3 | -15.8 | H | 0 | 1.25 | V |
| 4180.31 | -72.0 | 35.0 | -5.8 | 14.3 | -29.5 | 32.7 | 46.7 | 60.3 | -13.6 | H | 360 | 1.25 | V |



Figure 6: Field Strength Spurious Radiation

| | | Field Strength of Spurious Radiation | |
|-----------------|--------------------------------------|---------------------------------------------|-----------------------------------------------------|
| DNB Job Number: | RV48148A | Date: | 17 June 2004 |
| Customer: | EH Enterprises | | |
| Model Number: | HHT-107 | Serial Number: | n/a |
| Description: | Handheld Transmitter | | Conformance Standards FCC Part 2.1053 Part |
| | | | |
| | Antenna Vertical Polarization | | |

| Freq | dBm | dBuV | D/C | CL | Amp | Ant | Corr | Limit | Delta | Polar | Table | Mast | Eut |
|---------|-------|------|------|------|-------|------|------|-------|-------|-------|-------|------|-----|
| 418.05 | -35.7 | 71.3 | -5.8 | 3.2 | -24.6 | 16.4 | 60.5 | 80.3 | -19.8 | V | 123 | 1.89 | H |
| 836.09 | -52.1 | 54.9 | -5.8 | 5.1 | -25.1 | 22.3 | 51.4 | 60.3 | -8.9 | V | 82 | 3.01 | H |
| 1254.03 | -48.0 | 59.0 | -5.8 | 7.2 | -31.9 | 24.4 | 52.9 | 60.3 | -7.4 | V | 312 | 1.29 | H |
| 1672.01 | -47.0 | 60.0 | -5.8 | 8.7 | -33.2 | 25.6 | 55.3 | 60.3 | -5.0 | V | 354 | 1.47 | H |
| 2089.95 | -72.0 | 35.0 | -5.8 | 10.0 | -31.3 | 27.6 | 35.5 | 60.3 | -24.8 | V | 193 | 1.32 | H |
| 2508.13 | -72.0 | 35.0 | -5.8 | 11.0 | -31.1 | 28.1 | 37.2 | 60.3 | -23.1 | V | 0 | 1.00 | H |
| 2926.19 | -72.0 | 35.0 | -5.8 | 11.8 | -31.2 | 30.2 | 40.0 | 60.3 | -20.3 | V | 360 | 1.00 | H |
| 3344.48 | -72.0 | 35.0 | -5.8 | 12.7 | -30.7 | 31.0 | 42.2 | 60.3 | -18.1 | V | 0 | 1.00 | H |
| 3762.38 | -72.0 | 35.0 | -5.8 | 13.6 | -30.4 | 32.1 | 44.5 | 60.3 | -15.8 | V | 360 | 1.25 | H |
| 4180.31 | -72.0 | 35.0 | -5.8 | 14.3 | -29.5 | 32.7 | 46.7 | 60.3 | -13.6 | V | 0 | 1.25 | H |
| | | | | | | | | | | | | | |
| 418.05 | -24.0 | 83.0 | -5.8 | 3.2 | -24.6 | 16.4 | 72.2 | 80.3 | -8.1 | V | 59 | 1.28 | V |
| 836.09 | -50.0 | 57.0 | -5.8 | 5.1 | -25.1 | 22.3 | 53.5 | 60.3 | -6.8 | V | 94 | 1.54 | V |
| 1254.03 | -43.5 | 63.5 | -5.8 | 7.2 | -31.9 | 24.4 | 57.4 | 60.3 | -2.9 | V | 39 | 1.63 | V |
| 1672.01 | -45.0 | 62.0 | -5.8 | 8.7 | -33.2 | 25.6 | 57.3 | 60.3 | -3.0 | V | 191 | 1.20 | V |
| 2089.95 | -72.0 | 35.0 | -5.8 | 10.0 | -31.3 | 27.6 | 35.5 | 60.3 | -24.8 | V | 33 | 2.27 | V |
| 2508.13 | -72.0 | 35.0 | -5.8 | 11.0 | -31.1 | 28.1 | 37.2 | 60.3 | -23.1 | V | 265 | 2.96 | V |
| 2926.19 | -72.0 | 35.0 | -5.8 | 11.8 | -31.2 | 30.2 | 40.0 | 60.3 | -20.3 | V | 16 | 1.00 | V |
| 3344.48 | -72.0 | 35.0 | -5.8 | 12.7 | -30.7 | 31.0 | 42.2 | 60.3 | -18.1 | V | 286 | 1.38 | V |
| 3762.38 | -72.0 | 35.0 | -5.8 | 13.6 | -30.4 | 32.1 | 44.5 | 60.3 | -15.8 | V | 174 | 1.00 | V |
| 4180.31 | -72.0 | 35.0 | -5.8 | 14.3 | -29.5 | 32.7 | 46.7 | 60.3 | -13.6 | V | 85 | 1.45 | V |



Frequency Stability

Per 2.1055

Definition:

The measurement of frequency stability with variation of the ambient temperature and/or supply voltage.

Test Method:

Supply Voltage:

For hand carried, battery powered equipment, reduce primary supply voltage to the battery operating end point which shall be specified by the manufacturer.

Ambient Temperature:

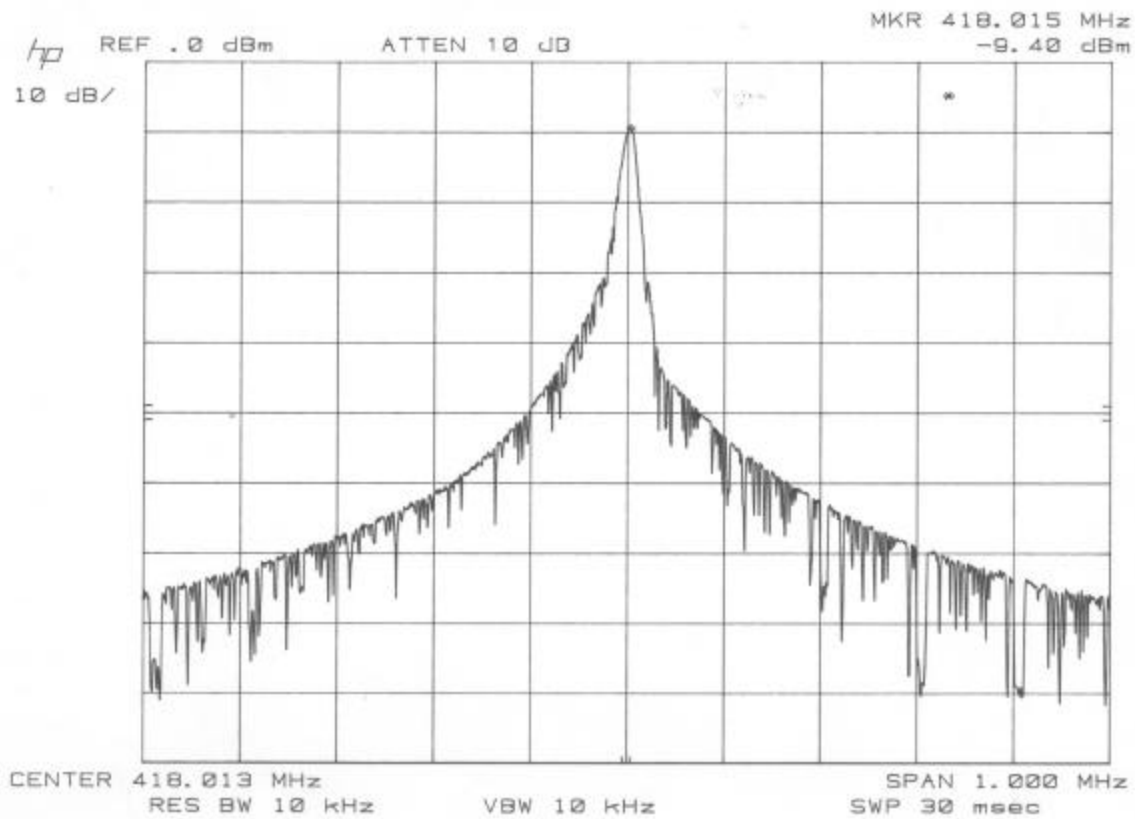
Frequency measurements shall be made at the extremes of the specified temperature range and at intervals of not more than 10[deg] centigrade through the range. A period of time sufficient to stabilize all of the components of the oscillator circuit at each temperature level shall be allowed prior to frequency measurement.

Test Results: See Test Plots.



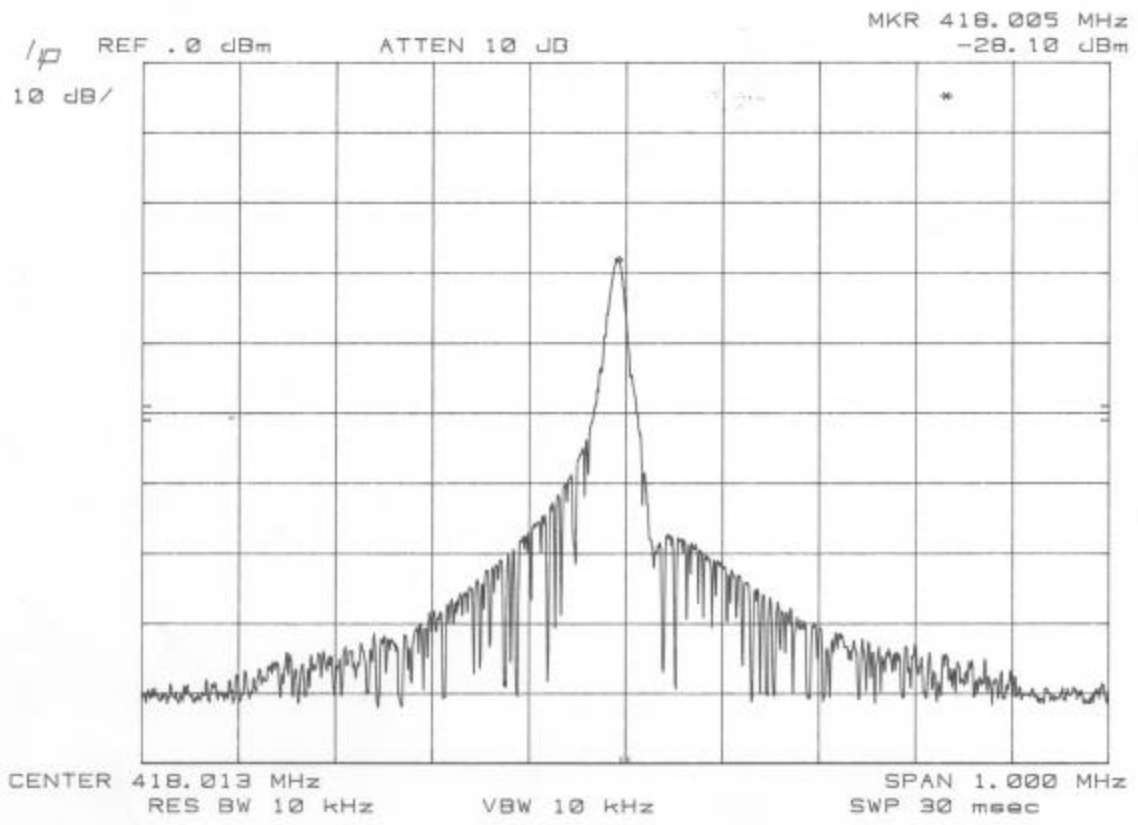
Figure 7: Frequency Stability

| | | Frequency Stability Supply Voltage | |
|-----------------|----------------------|-----------------------------------------------|--------------------------------------------------------|
| DNB Job Number: | RV48148A | Date: June 17 2004 | Conformance Standards FCC Part 2.1055 Part |
| Customer: | EH Enterprises | | |
| Model Number: | HHT-107 | Serial Number: n/a | |
| Description: | Handheld Transmitter | | |
| | | Full Power 9 V | |



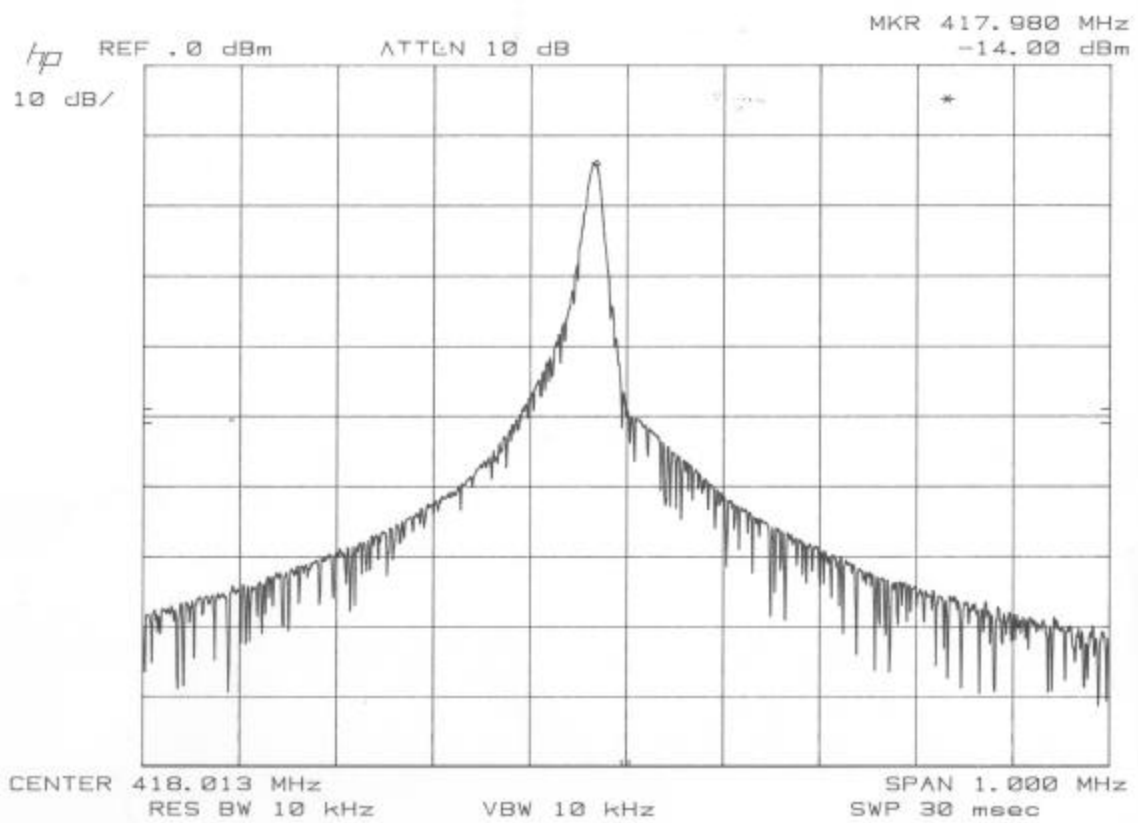


| | | Frequency Stability Supply Voltage | |
|-----------------|----------------------|-----------------------------------------------|--------------------------------------------------------|
| DNB Job Number: | RV48148A | Date: June 17 2004 | Conformance Standards FCC Part 2.1055 Part |
| Customer: | EH Enterprises | | |
| Model Number: | HHT-107 | Serial Number: n/a | |
| Description: | Handheld Transmitter | | |
| | | 2.1 V just before drop out | |



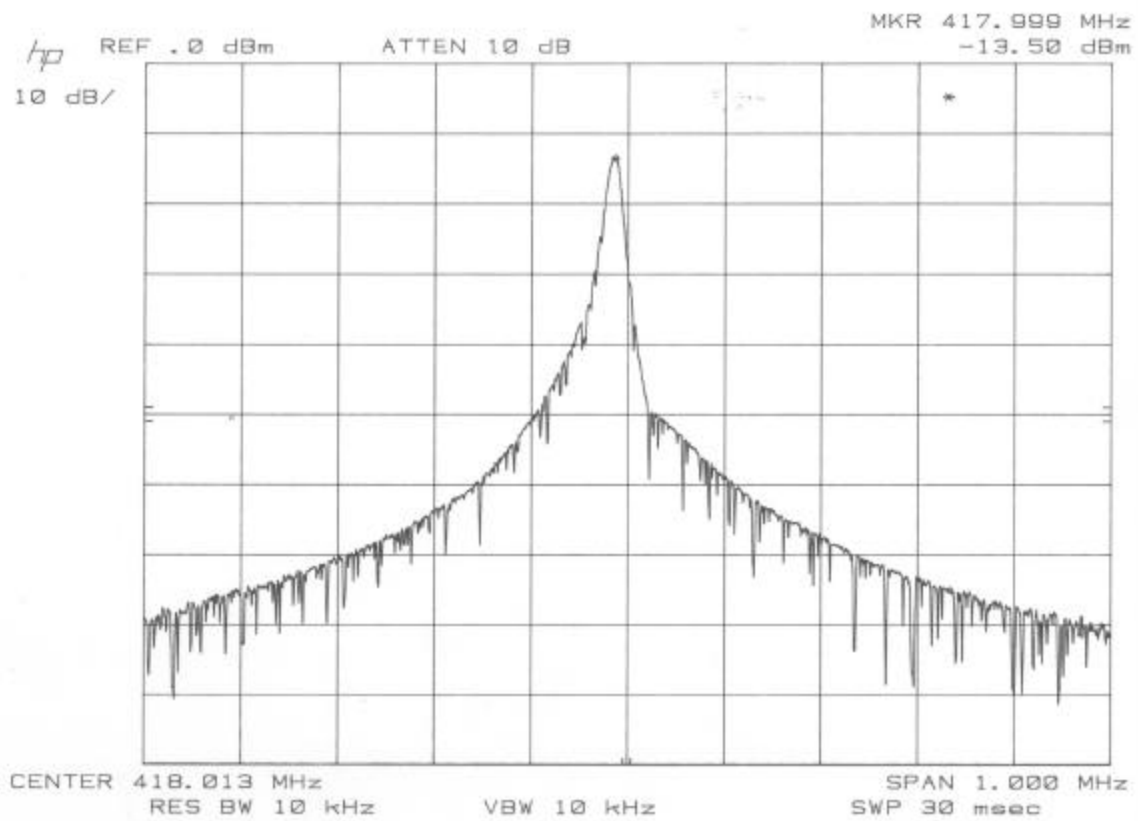


| | | Frequency Stability Ambient Temperature | |
|-----------------|----------------------|--------------------------------------------|--------------------------------------------------------|
| DNB Job Number: | RV48148A | Date: June 17 2004 | Conformance Standards FCC Part 2.1055 Part |
| Customer: | EH Enterprises | | |
| Model Number: | HHT-107 | Serial Number: n/a | |
| Description: | Handheld Transmitter | | |
| | - 30 C | | |



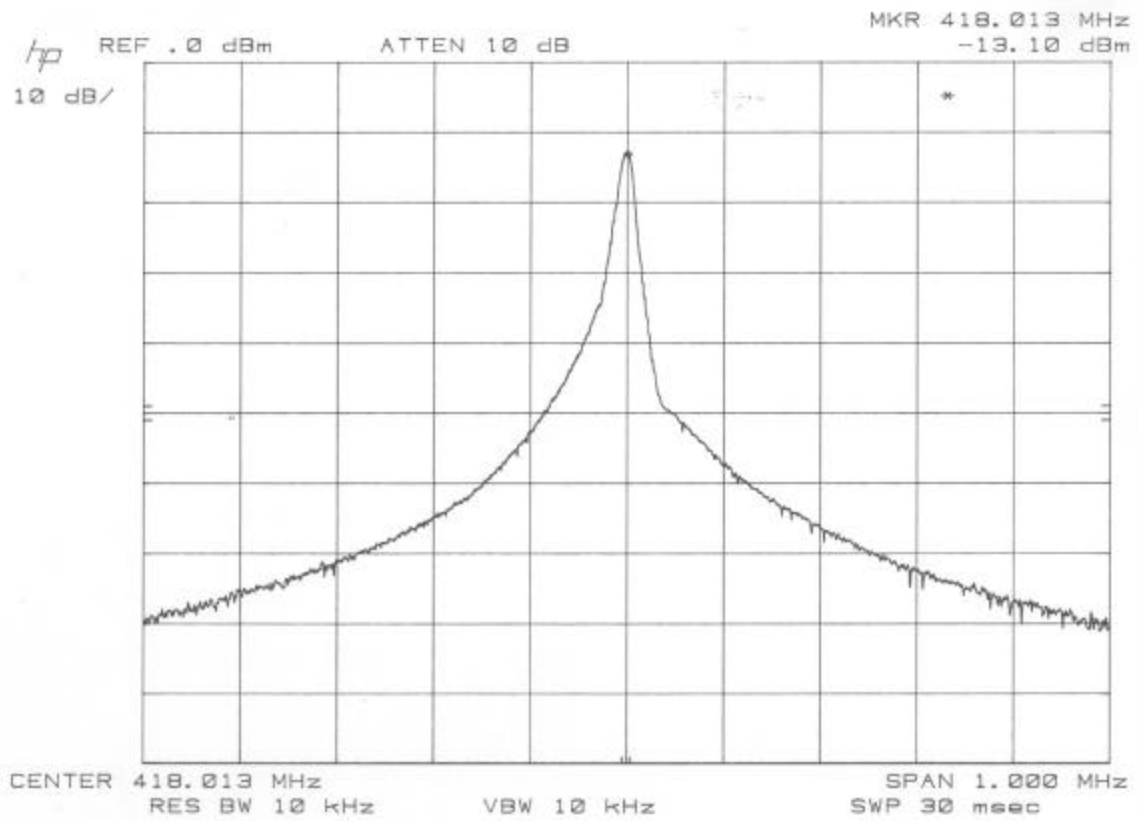


| | | Frequency Stability Ambient Temperature | |
|-----------------|----------------------|--------------------------------------------|-----------------------------------------------------|
| DNB Job Number: | RV48148A | Date: June 17 2004 | Conformance Standards FCC Part 2.1055 Part |
| Customer: | EH Enterprises | | |
| Model Number: | HHT-107 | Serial Number: n/a | |
| Description: | Handheld Transmitter | | |
| | | - 20 C | |



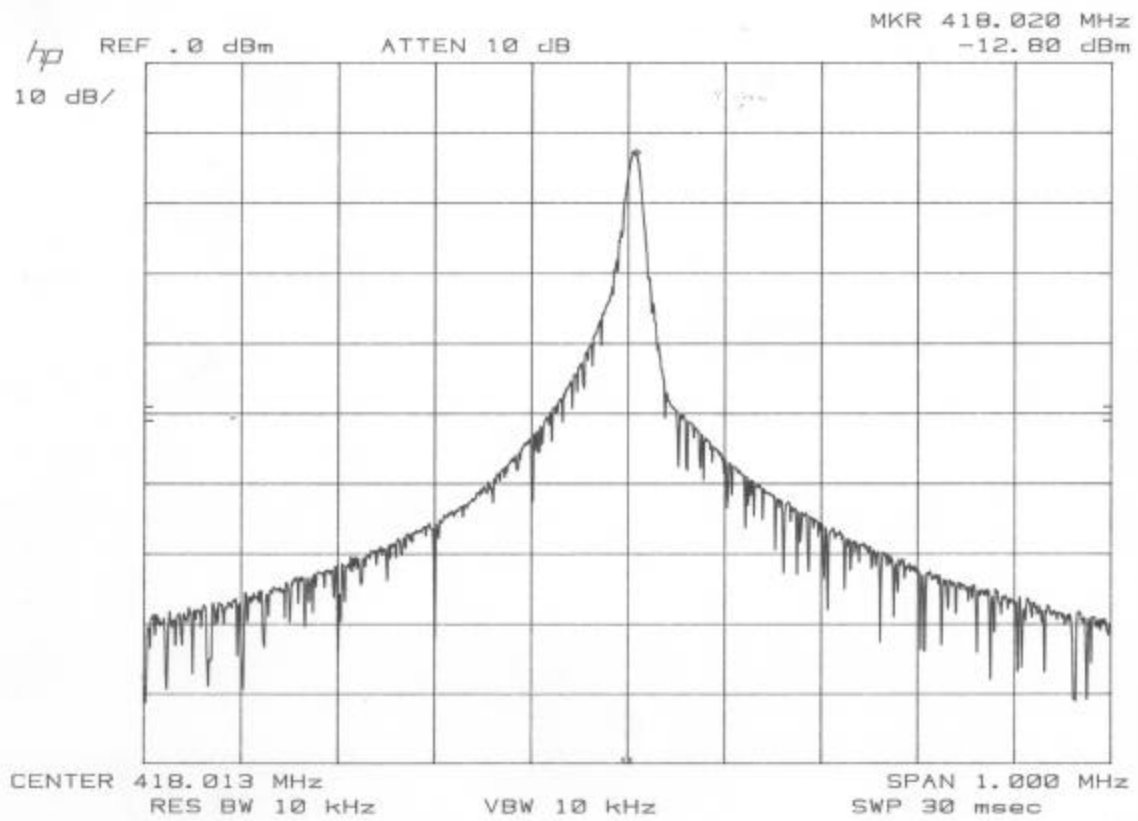


| | | Frequency Stability Ambient Temperature | |
|-----------------|----------------------|----------------------------------------------------|--------------------------------------------------------|
| DNB Job Number: | RV48148A | Date: June 17 2004 | Conformance Standards FCC Part 2.1055 Part |
| Customer: | EH Enterprises | | |
| Model Number: | HHT-107 | Serial Number: n/a | |
| Description: | Handheld Transmitter | | |
| | -10 C | | |



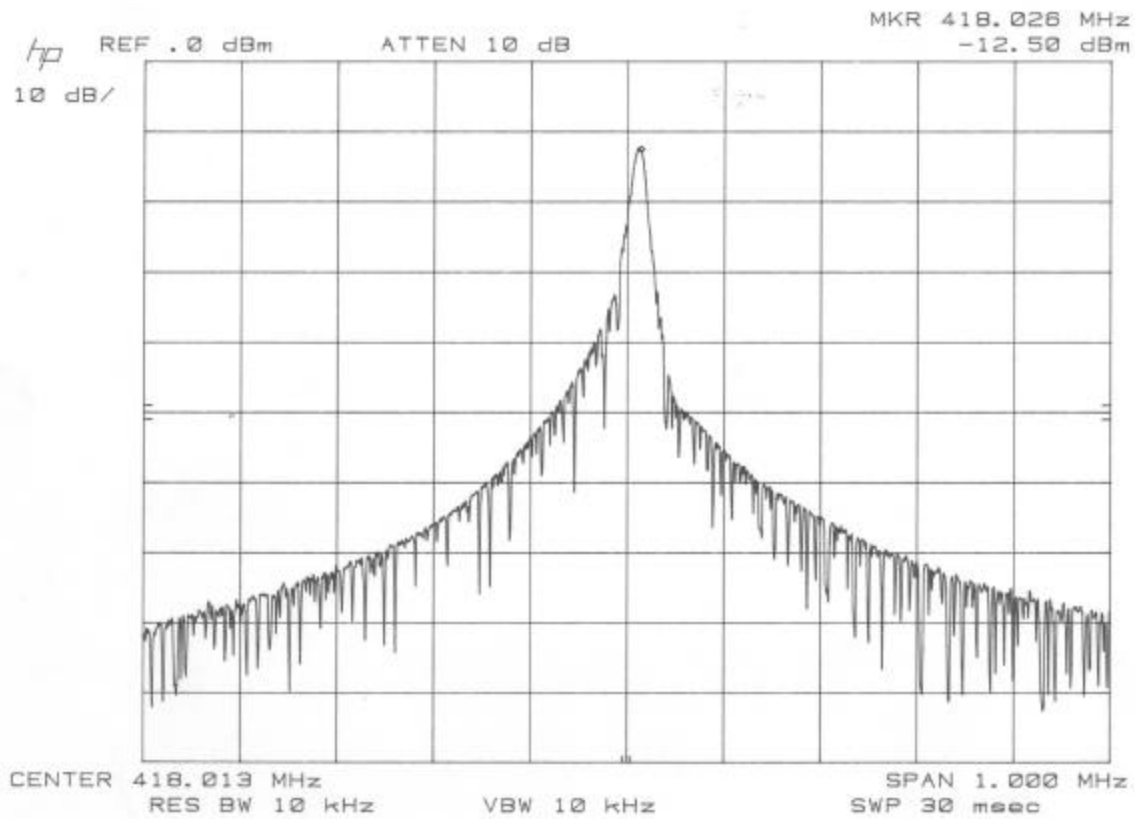


| | | | Frequency Stability Ambient Temperature | |
|-----------------|----------------------|----------------|--------------------------------------------------------|--|
| DNB Job Number: | RV48148A | Date: | June 17 2004 | |
| Customer: | EH Enterprises | | | |
| Model Number: | HHT-107 | Serial Number: | n/a | |
| Description: | Handheld Transmitter | | | |
| | | | | |
| | 0 C | | | |
| | | | Conformance Standards FCC Part 2.1055 Part | |



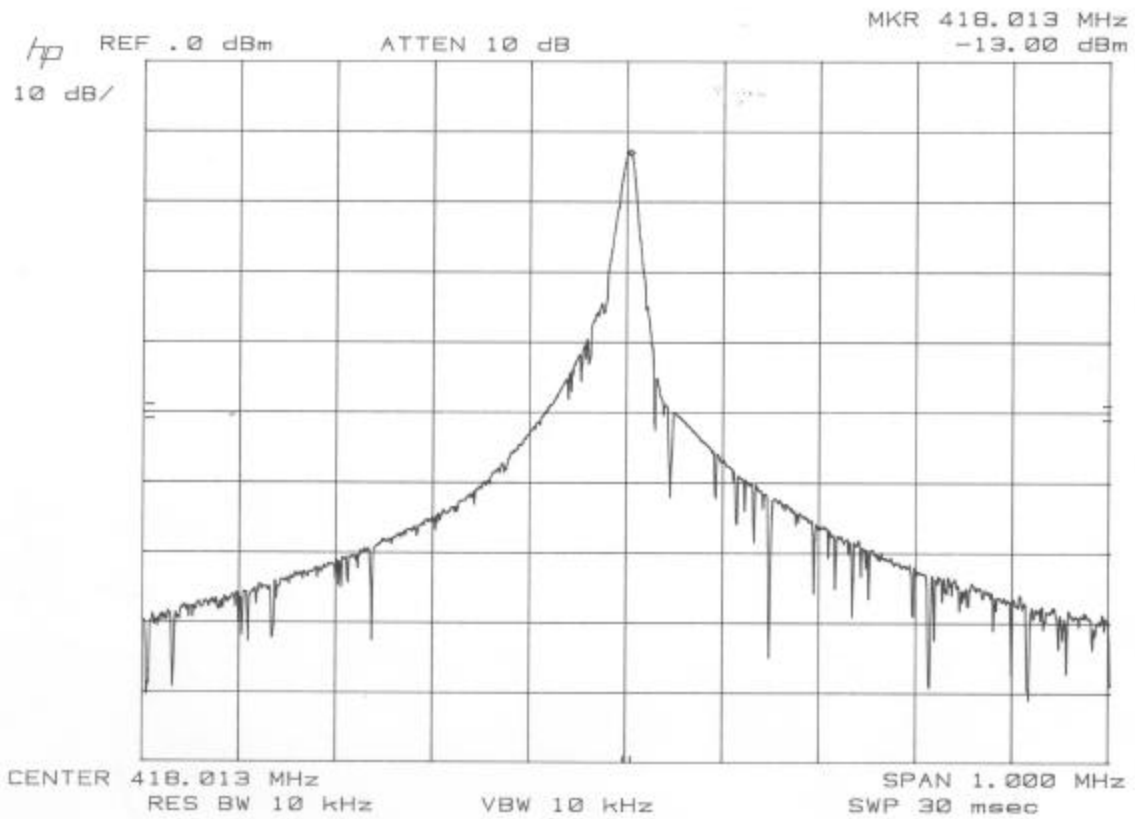


| | | Frequency Stability Ambient Temperature | |
|-----------------|----------------------|----------------------------------------------------|--------------------------------------------------------|
| DNB Job Number: | RV48148A | Date: June 17 2004 | Conformance Standards FCC Part 2.1055 Part |
| Customer: | EH Enterprises | | |
| Model Number: | HHT-107 | Serial Number: n/a | |
| Description: | Handheld Transmitter | | |
| | | 10 C | |



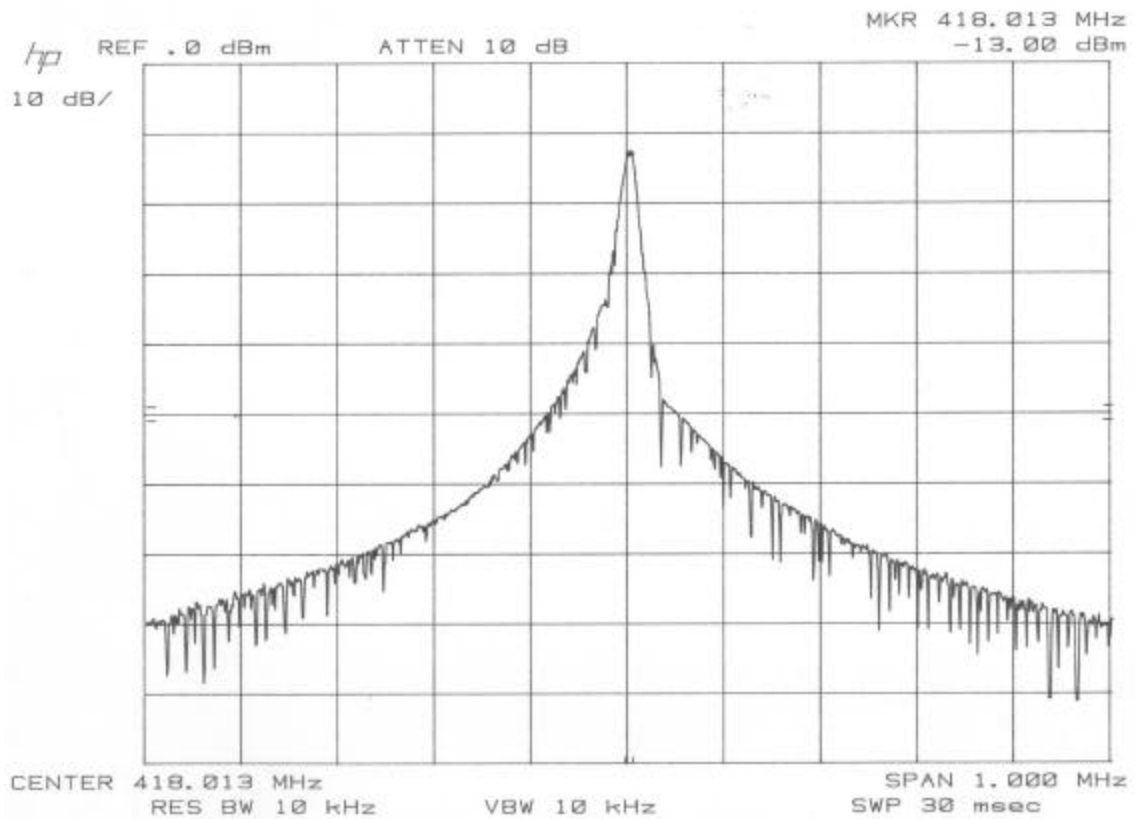


| | | Frequency Stability Ambient Temperature | |
|-----------------|----------------------|----------------------------------------------------|--------------------------------------------------------|
| DNB Job Number: | RV48148A | Date: June 17 2004 | Conformance Standards FCC Part 2.1055 Part |
| Customer: | EH Enterprises | | |
| Model Number: | HHT-107 | Serial Number: n/a | |
| Description: | Handheld Transmitter | | |
| | | 20 C | |



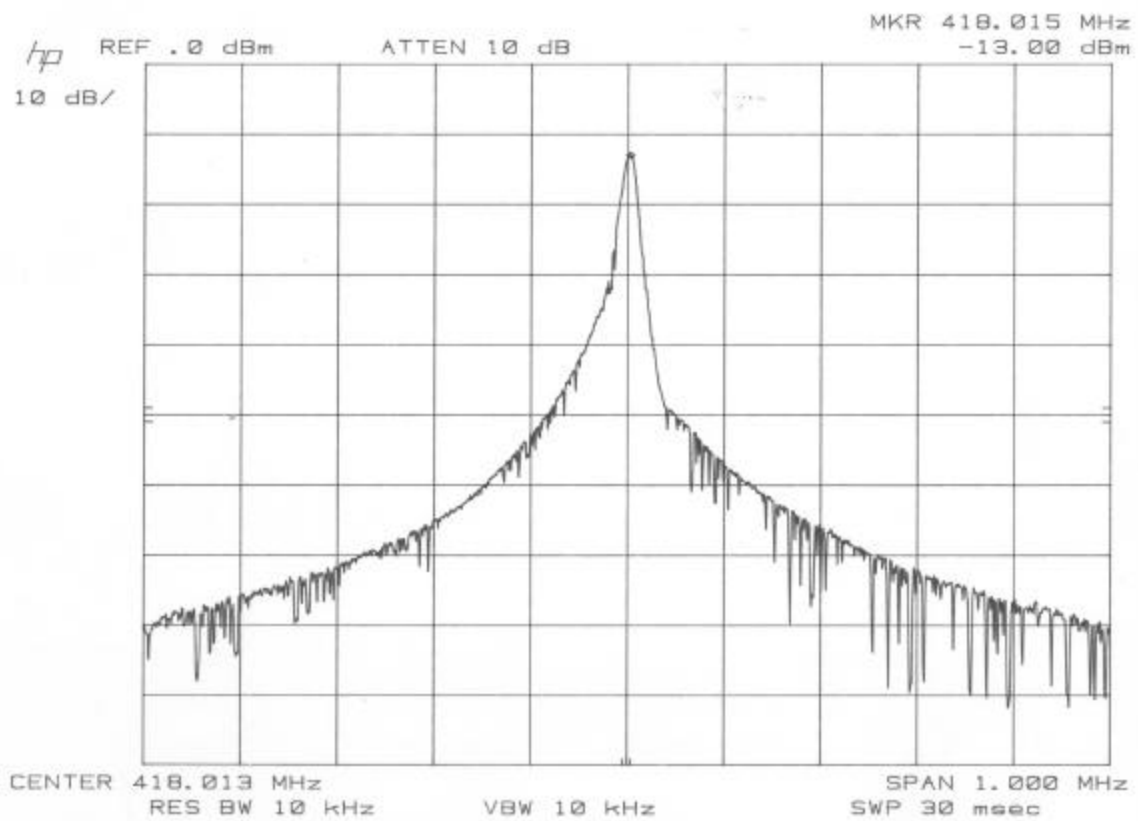


| | | Frequency Stability Ambient Temperature | |
|-----------------|----------------------|--------------------------------------------|--------------------------------------------------------|
| DNB Job Number: | RV48148A | Date: June 17 2004 | Conformance Standards FCC Part 2.1055 Part |
| Customer: | EH Enterprises | | |
| Model Number: | HHT-107 | Serial Number: n/a | |
| Description: | Handheld Transmitter | | |
| | 30 C | | |



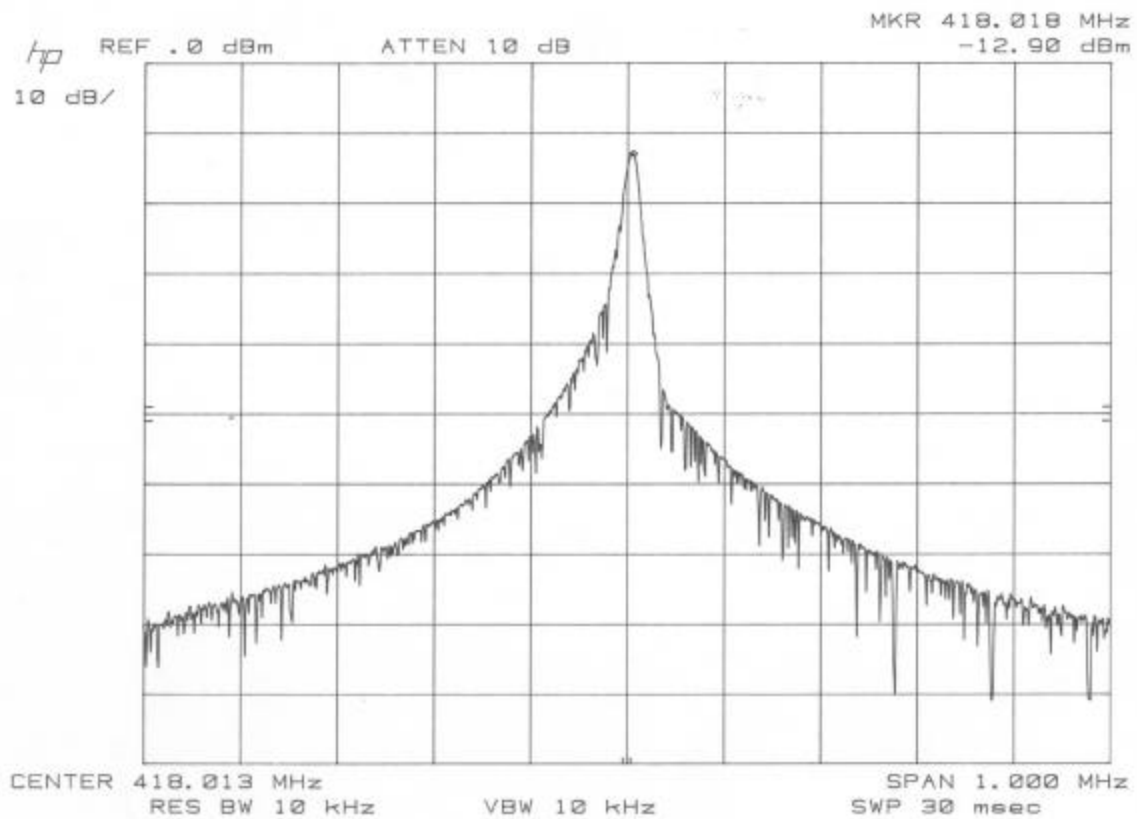


| | | Frequency Stability Ambient Temperature | |
|-----------------|----------------------|----------------------------------------------------|--------------------------------------------------------|
| DNB Job Number: | RV48148A | Date: June 17 2004 | Conformance Standards FCC Part 2.1055 Part |
| Customer: | EH Enterprises | | |
| Model Number: | HHT-107 | Serial Number: n/a | |
| Description: | Handheld Transmitter | | |
| | | 40 C | |



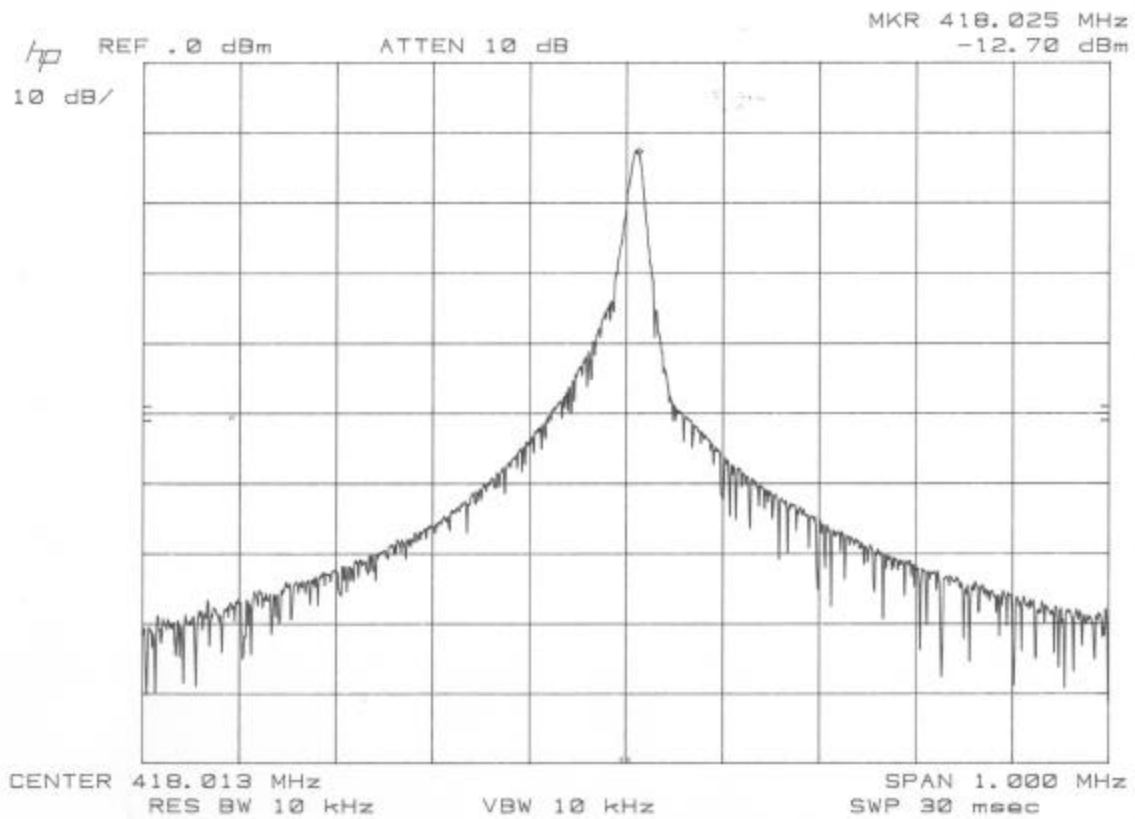


| | | | Frequency Stability Ambient Temperature | |
|-----------------|----------------------|----------------|--------------------------------------------------------|--|
| DNB Job Number: | RV48148A | Date: | June 17 2004 | |
| Customer: | EH Enterprises | | | |
| Model Number: | HHT-107 | Serial Number: | n/a | |
| Description: | Handheld Transmitter | | | |
| | | | | |
| | 50 C | | | |
| | | | Conformance Standards FCC Part 2.1055 Part | |





| | | Frequency Stability Ambient Temperature | |
|-----------------|----------------------|----------------------------------------------------|--------------------------------------------------------|
| DNB Job Number: | RV48148A | Date: June 17 2004 | Conformance Standards FCC Part 2.1055 Part |
| Customer: | EH Enterprises | | |
| Model Number: | HHT-107 | Serial Number: n/a | |
| Description: | Handheld Transmitter | | |
| | 60 C | | |





2.1033 (b) 7 Photographs:

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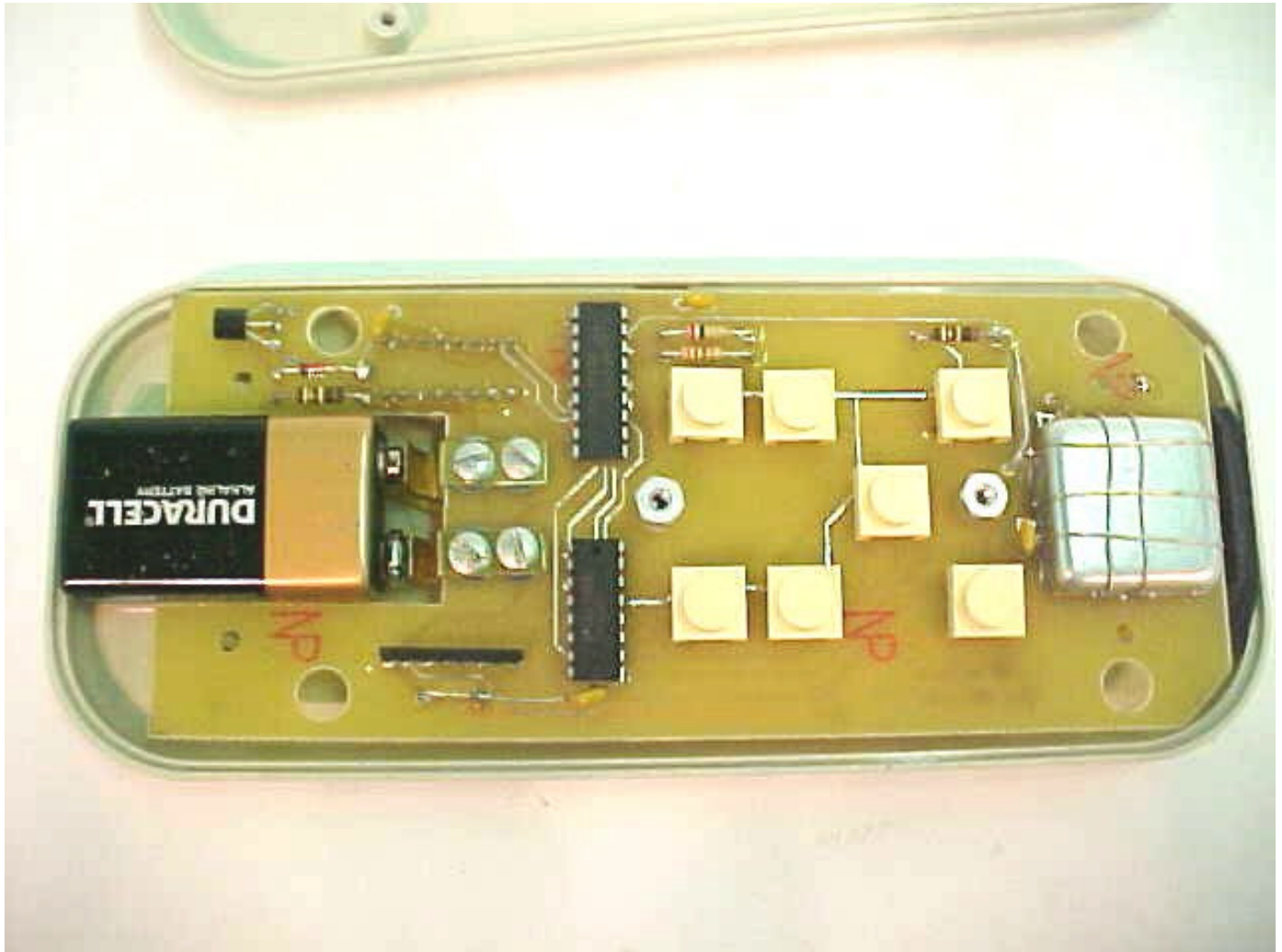
EUT External Front



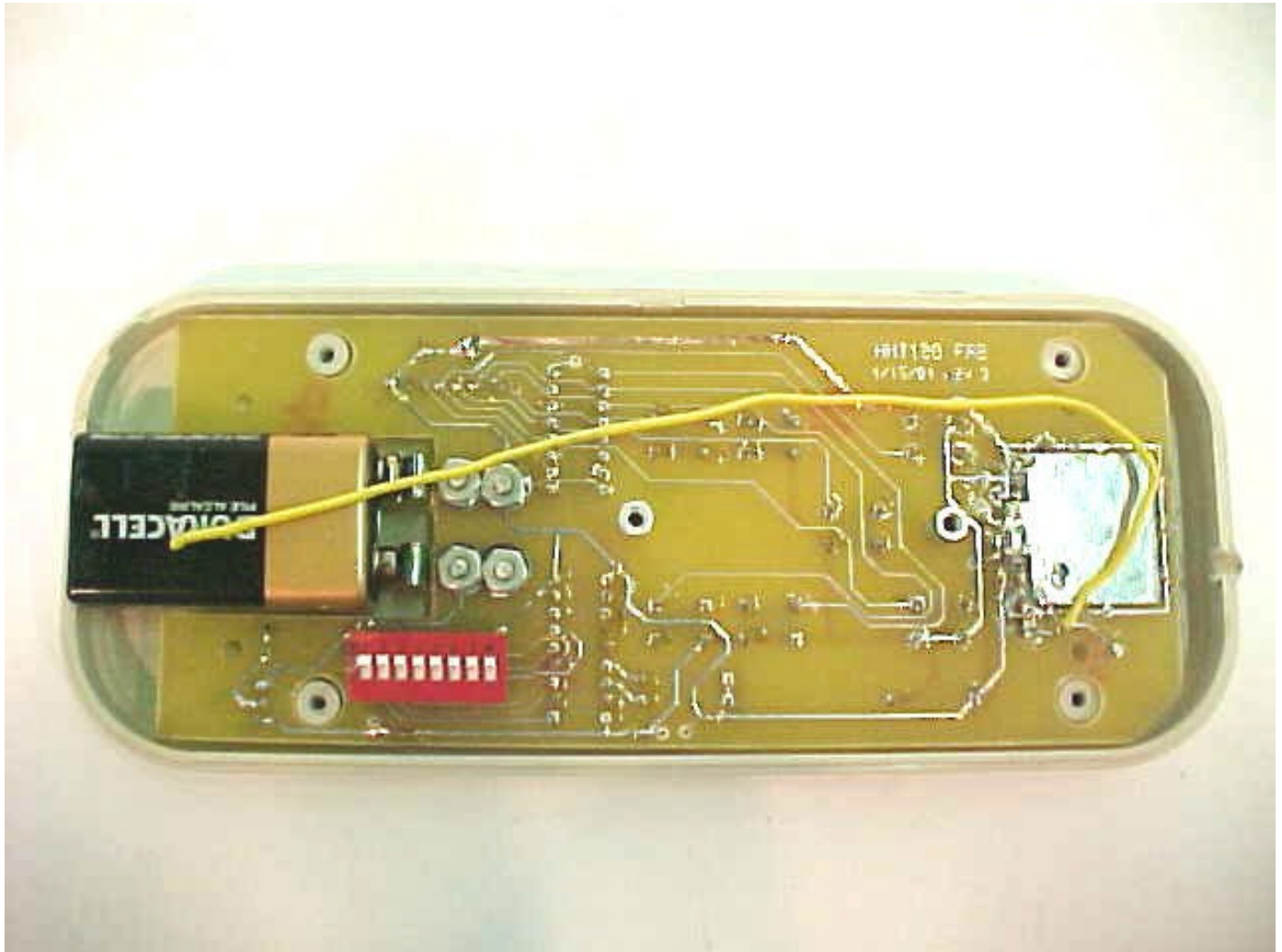
EUT External Back



EUT Internal Front



EUT Internal Back



2.1033 (b) 7 Labeling Requirements:

Label will be constructed of 0.02-inch plastic attached as shown on the equipment with permanent adhesive or equivalent.

All information on the label will be etched or screened. All methods will exceed the expected lifetime of the equipment.

The label will be large enough to allow all information to be readily legible.

Additional Label Requirement

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) This device must accept any interference received, including interference that may cause undesired operation.

Shown above is a copy of the label with the Part 15.19 Compliance Statement, Location of required information is checked "below".

The label will be placed in a conspicuous location on the device.

Because of the small size of this device the required information may be placed in the documentation provided to the user. The FCC ID shall be placed upon the unit. This is in accordance with FCC Part 15.19 (a) (5).

Label Placement Depiction





2.1033 (b) 8 Accessory Equipment:

None

2.1033 (b) 9 Transitional Period:

This equipment is not being authorized under the transitional provisions of 15.37

2.1033 (b) 10 Scanning Receivers:

Not Applicable

2.1033 (b) 11 Transmitters 59.0-64.0 GHz

Not Applicable

END of Test Report