APPLICANT: GENOTECH CO., LTD.

FCC ID: OM9GWL2400P

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## TEST EQUIPMENT LIST

1. Spectrum Analyzer: HP 8566B-Opt 462, S/N 3138A07786, w/ preselector HP 85685A, S/N 3221A01400, Quasi-Peak Adapter HP 8565OA, S/N 3303A01690 & Preamplifier HP 8449B-OPT H02, S/N 3008A00372 Cal. 1/19/01
2. Biconnical Antenna: Eaton Model 94455-1, S/N 1057, Cal 3/15/00
3. Biconnical Antenna: Electro-Metrics Model BIA-25, S/N 1171 Cal. 3/16/01
4. Log-Periodic Antenna: Electro-Metrics Model EM-6950, S/N 632 Cal. 3/15/00
5. Log-Periodic Antenna: Electro-Metrics Model LPA-30, S/N 409 Cal. 3/15/00
6. Double-Ridged Horn Antenna: Electro-Metrics Model RGA-180, 1-18 GHz, S/N 2319
7. 18-26.3GHz Systron Donner Standard Gain Horn #DBE-520-20
8. Horn 40-60GHz: ATM Part #19-443-6R
9. Line Impedance Stabilization Network: Electro-Metrics Model EM-7820, w/NEMA Adapter S/N 2682 Cal. 3/16/01
10. Temperature Chamber: Tenney Engineering Model TTRC, S/N 11717-7 Cal. 1/21/01
11. Frequency Counter: HP Model 5385A, S/N 3242A07460 Cal 11/20/00
12. Peak Power Meter: HP Model 8900C, S/N 2131A00545, Cal. 1/26/01
13. Open Area Test Site #1-3meters Cal. 12/22/99
14. Signal Generator: HP 8640B, S/N 2308A21464 Cal. 11/21/00
15. Signal Generator: HP 8614A, S/N 2015A07428
16. Passive Loop Antenna: EMCO Model 6512, 9KHz to 30MHz, S/N 9706-1211 Cal. 6/10/00
17. Dipole Antenna Kit: Electro-Metrics Model TDA-30/1-4, S/N 153 Cal. 11/24/00
18. AC Voltmeter: HP Model 400FL, S/N 2213A14499 Cal. 2/1/01
19. Digital Multimeter: Fluke Model 8012A, S/N 4810047 Cal 9/21/99
20. Digital Multimeter: Fluke Model 77, S/N 43850817 Cal 11/16/00
21. Oscilloscope: Tektronix Model 2230, S/N 300572 Cal 2/1/01

## TEST PROCEDURE

GENERAL: This report shall NOT be reproduced except in full without the written approval of TIMCO ENGINEERING, INC. Shielded interface cables were used in all cases except for cables connecting to the telephone line and the power cords. A test program was run which simulated a normal data transmission on a network.

POWER LINE CONDUCTED INTERFERENCE: The procedure used was ANSI STANDARD C63.4-1992 using a 50uH LISN. Both lines were observed with the UUT transmitting. The bandwidth of the spectrum analyzer was 10kHz with an appropriate sweep speed. The ambient temperature of the UUT was 99°F with a humidity of 22%.

## TEST PROCEDURES CONTINUED

BANDWIDTH 6.0dB: The measurements were made withe the spectrum analyzer's resolution bandwidth(RBW)=1.0MHz and the video bandwidth(VBW) =3.0MHz and the span set as shown on page 8.

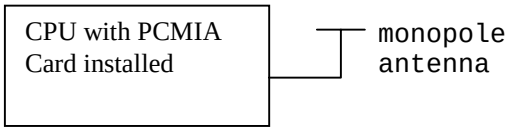
POWER OUTPUT: The RF power output was measured at the antenna feed point using a peak power meter.

ANTENNA CONDUCTED EMISSIONS: The RBW=100KHz, VBW=300KHz and the span set to 10.0MHz and the spectrum was scanned from 30MHz to the 10th Harmonic of the fundamental. Above 1.0GHz the resolution bandwidth was 1.0MHz and the VBW = 3.0MHz and the span to 50MHz.

RADIATION INTERFERENCE: The test procedure used was ANSI STANDARD C63.4-1992 using a HEWLETT PACKARD spectrum analyzer with a preselector. The bandwidth(RBW) of the spectrum analyzer was 100kHz up to 1GHz and 1.0MHz above 1GHz with an appropriate sweep speed. The VBW above 1.0GHz was = 3.0MHz. The analyzer was calibrated in dB above a microvolt at the output of the antenna. The ambient temperature of the UUT was 99°F with a humidity of 22%.

PRODUCT DESCRIPTION:

This device is a wireless LAN adapter card that provides wireless connection between computers.




| | |
|---|---|
| FREQUENCY RANGE: | 2.4-2.4835 GHz |
| SUPPORT BIT RATES: | 11 Mbps CCK, 5.5 Mbps CCK, 2 Mbps DQPSK, 1 mPBS dbsk |
| SPREADING: | DSSS (Direct Sequence Spread Spectrum) |
| CHIP RATE: | 11 Mcps |
| ANTENNA: | Internal antenna |
| MEDIA ACCESS PROTOCOL: | CSMA/CA (Collission Avoidance) with ACK |

APPLICANT: GENOTECH CO., LTD.

FCC ID: OM9GWL2400P

NAME OF TEST: POWER LINE CONDUCTED INTERFERENCE

RULES PART NUMBER: 15.107(a)

REQUIREMENTS: .45 - 30 MHz 250 uV OR 47.96 dBuV

TEST PROCEDURE: ANSI STANDARD C63.4-1992. The spectrum was scanned from .45 to 30 MHz.

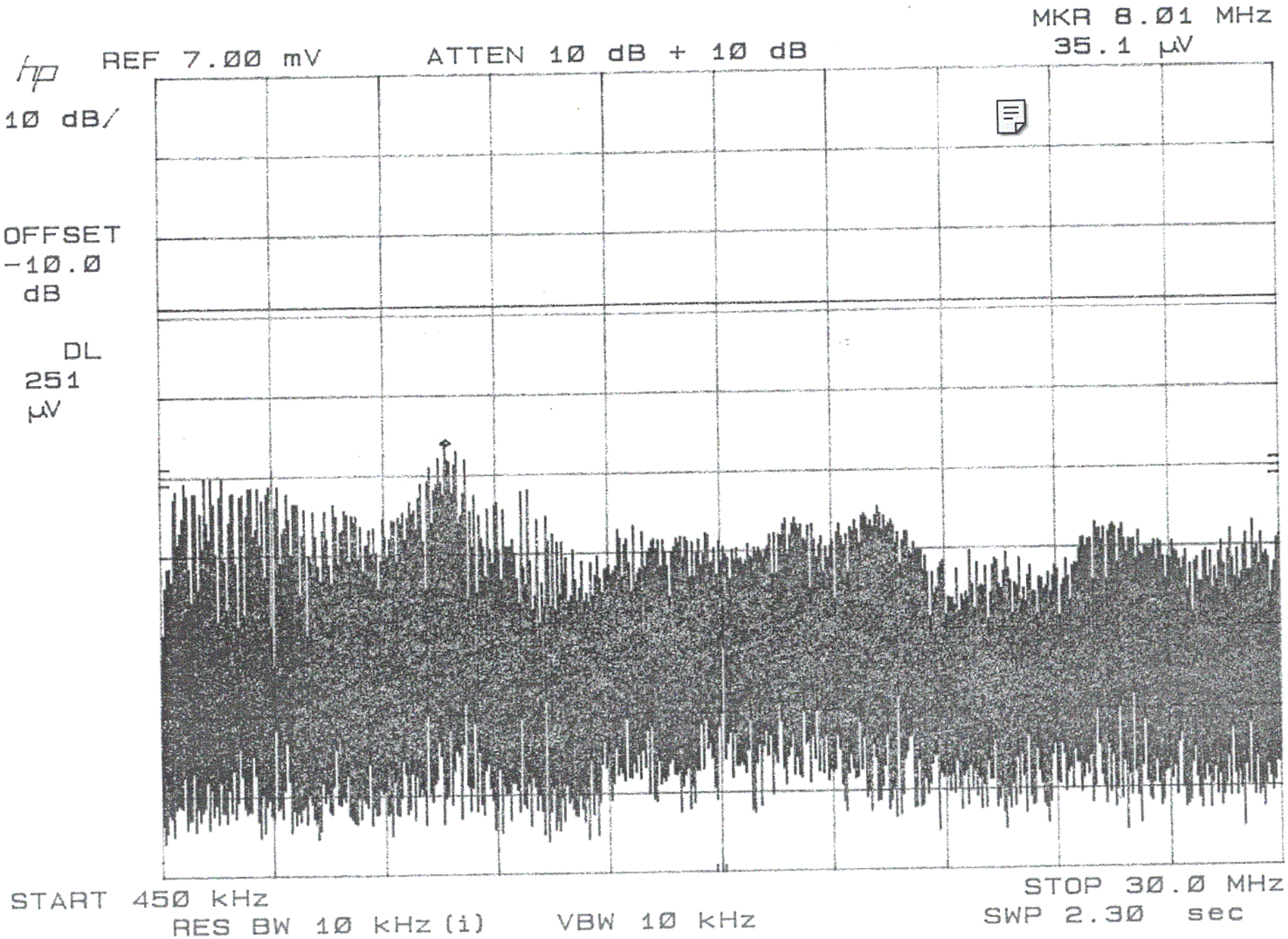
TEST DATA:

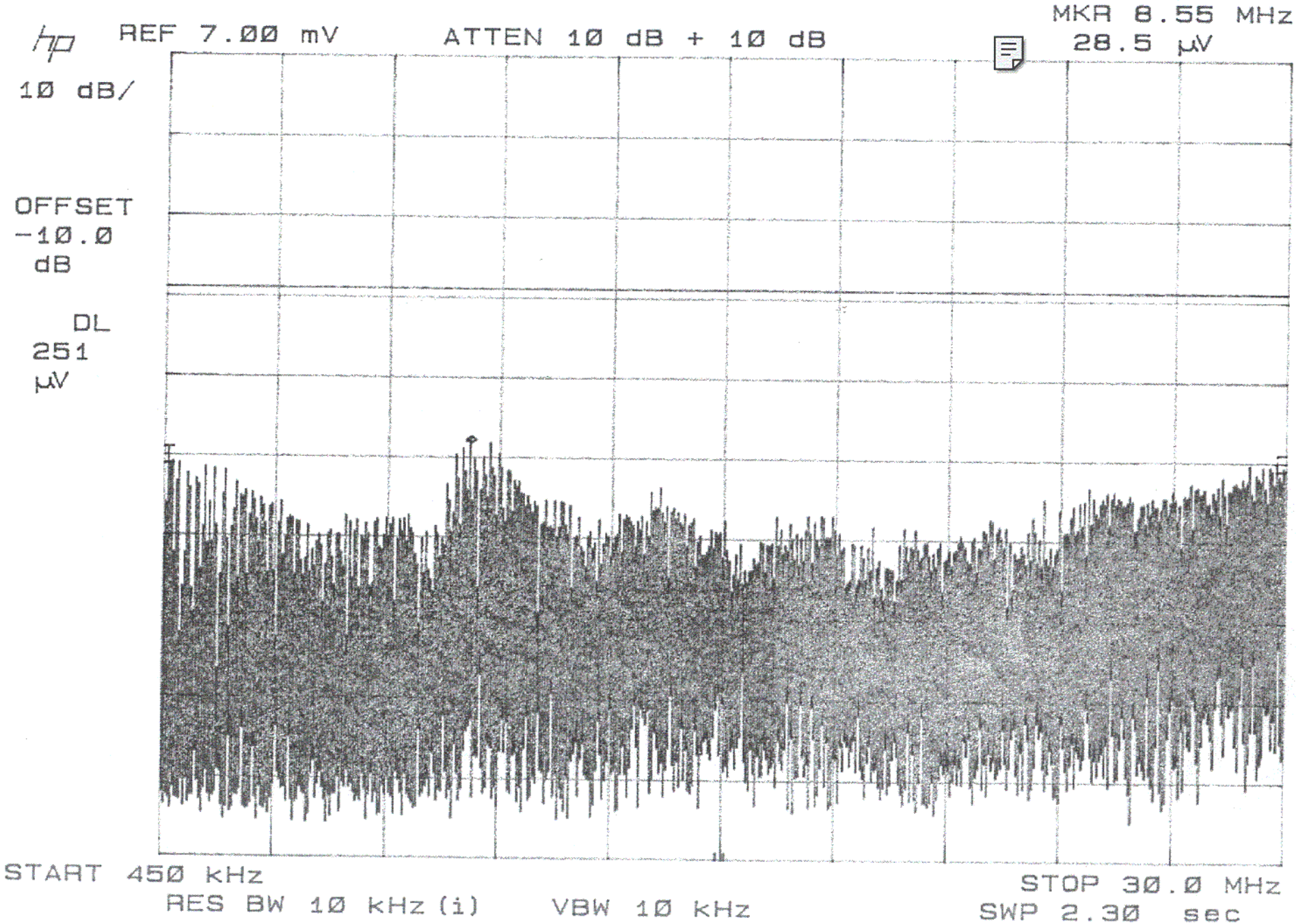
THE HIGHEST EMISSION READ FOR LINE 1 WAS 35.1 uV @ 8.01 MHz.

THE HIGHEST EMISSION READ FOR LINE 2 WAS 28.5 uV @ 8.55 MHz.

THE GRAPHS IN PAGES 5-6 REPRESENT THE EMISSIONS TAKEN FOR THIS DEVICE.

TEST RESULTS: Both lines were observed. The measurements indicate that the unit DOES appear to meet the FCC requirements for this class of equipment.


MKR 8.01 MHz
35.1 µV
REF 7.00 mV
ATTEN 10 dB + 10 dB
10 dB/
OFFSET
-10.0
dB
DL
251
µV
START 450 kHz
RES BW 10 kHz (i)
VBW 10 kHz
STOP 30.0 MHz
SWP 2.30 sec


hp
REF 7.00 mV
ATTEN 10 dB + 10 dB
MKR 8.55 MHz
28.5 µV
10 dB/
OFFSET
-10.0
dB
DL
251
µV
START 450 kHz
RES BW 10 kHz (i)
VBW 10 kHz
STOP 30.0 MHz
SWP 2.30 sec

APPLICANT: GENOTECH CO., LTD.

FCC ID: OM9GWL2400P

NAME OF TEST: 6.0dB BANDWIDTH

RULES PART NUMBER: 15.247(a)(2)

REQUIREMENTS: The 6.0dB bandwidth must be greater than 500KHz.

MEASUREMENT: The 6.0dB bandwidth measured @ 2413.00GHz was 10.40MHz.

MEASUREMENT DATA: See plot, Page # 8.

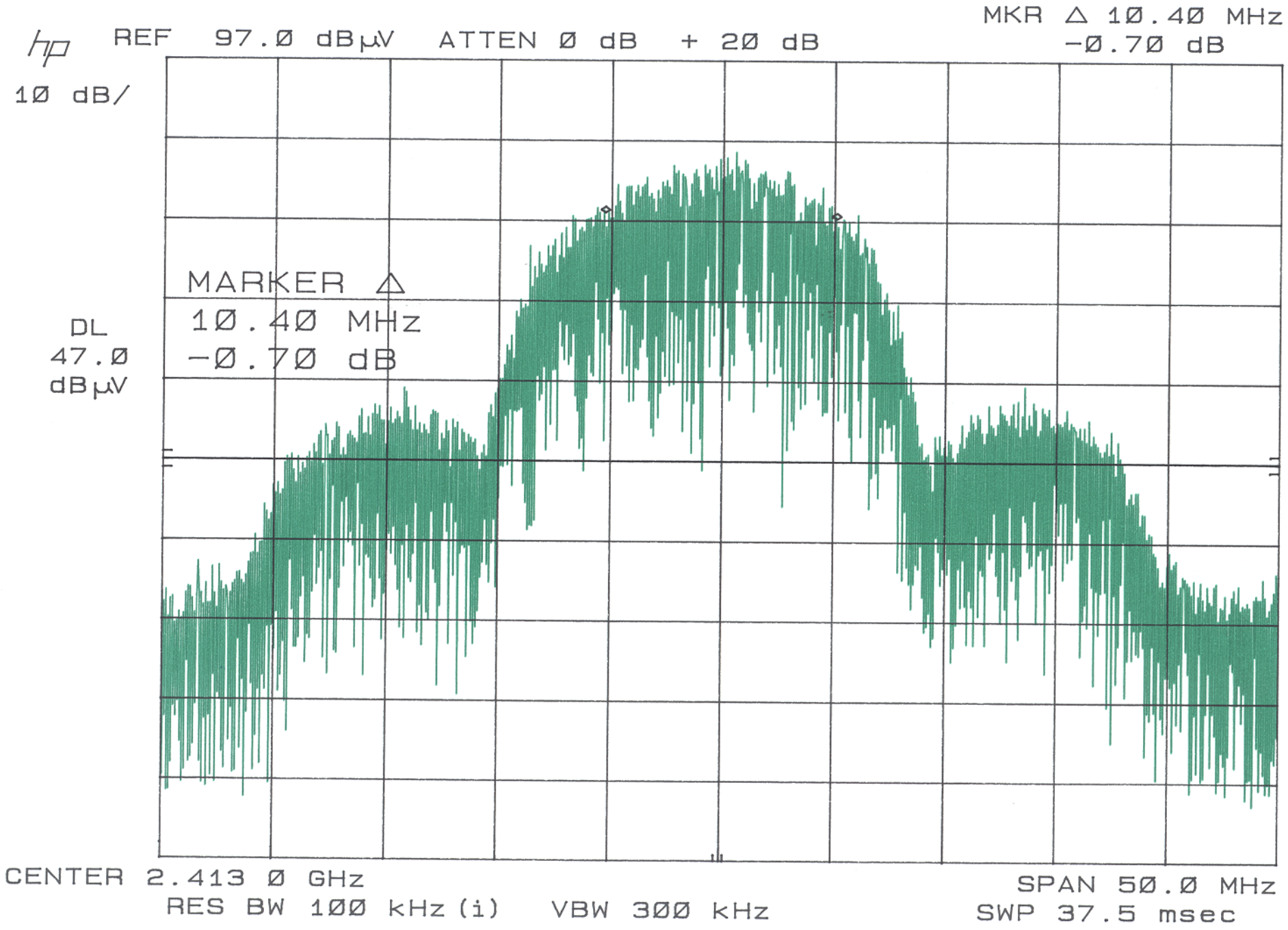
NAME OF TEST: POWER OUTPUT

RULES PART NUMBER: 15.247(b) 1.0Watt or +30dBm

MEASUREMENT: 26.0 mWATTS @ 2462.0MHz
22.0 mWATTS @ 2437.0MHz
15.0 mWATTS @ 2412.0MHz

15.247(c) Method of Measuring RF Power output:
The Peak power Sensor was connected
in place of the antenna.

```
                                                  /--------\
                                                  |HP      |
                                                  |PEAK    |
                                                  |PWR MTR |
                                                  |8900C   |
                                                  \--------/
                                                        |
/-----------\      /-----------------\                  |
|  UUT      |      | PEAK POWER      |                  |
| Mounted   |------| SENSOR HP84811A |------------------/
|  in       |      \-----------------/
| Laptop    |
| computer  |
\-----------/
```


hp
REF 97.0 dBμV ATTEN 0 dB + 20 dB
MKR Δ 10.40 MHz
-0.70 dB
10 dB/
MARKER Δ
10.40 MHz
-0.70 dB
DL
47.0
dBμV
CENTER 2.413 0 GHz
RES BW 100 kHz (i) VBW 300 kHz
SPAN 50.0 MHz
SWP 37.5 msec