

## **Addition to Test report UPRR010047-02**

- 1.1 §15.247 (a)(2)
- 1.2 §15.247 (d)
- 1.3 15.209 (at TX band edges)

**Title: Test on I-data Bluetooth printer adapter, to FCC Part 15 C clause 15.207, 15.209 and 15.247. Addition to UPRR010047-02.**

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**1.1. §15.247 (a) (2) – 6 dB bandwidth in acquisition mode (inquiry / page)**

The used RF bandwidths were measured at the lowest, highest and centre frequency in both inquiry and page mode.

**Measurement uncertainty:**

Amplitude:       **+/-1 dB**  
Frequency       **+/- 40 kHz**

**Measurement results:**

**Inquiry mode**

| Channel / TX freq. | Lowest / 2402MHz | Centre 2441MHz | Highest 2479MHz |
|--------------------|------------------|----------------|-----------------|
| Bandwidth [kHz]    | 1080             | 1153           | 1025            |

Centre frequency of highest channel is 2479 as BW in inquiry mode is 2MHz

**Page mode**

| Channel / TX freq. | Lowest / 2402MHz | Centre 2441MHz | Highest 2480MHz |
|--------------------|------------------|----------------|-----------------|
| Bandwidth [kHz]    | 885              | 913            | 973             |

Channels used in inquiry mode can be found in annex 1.  
Bandwidths in inquiry mode can be found in annex 2 – 4  
Channels used in page mode can be found in annex 5.  
Bandwidths in page mode can be found in annex 6 - 8

**Limit:**

For direct sequence systems the minimum 6dB bandwidth shall be at least 500kHz.

**Conclusion:**

**The EUT complies with the given limit.**

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**1.2. §15.247 (d) – Spectral power density in acquisition mode (inquiry / page)**

The maximum spectral power density is performed as a conducted measurement. The power is measured at the point where the antenna normally is connected. Measurements are performed with a bandwidth of 3kHz.

**Measurement uncertainty:**

Amplitude:        **+/-1 dB**

**Measurement results:**

To find the highest power density a scan over the full TX band was performed in both page and inquiry mode.  
For maximum peak power in inquiry mode is shown in annex 9.  
Maximum peak power in page mode is shown in annex 10.

Measurement shall be corrected for cable losses by adding 0.5dB to the values shown.

Corrected peak power density value in inquiry and page mode is found to be < -21dBm.

**Limit:**

For direct sequence systems, the peak power spectral power density conducted from the intentional radiator to the antenna shall not be greater than 8dBm in any 3kHz band during any time.

**Conclusion:**

**The EUT complies with the given limit.**

Test performed by:        FBOLL        Date:        23. June 2001

**Title: Test on I-data Bluetooth printer adapter, to FCC Part 15 C clause 15.207, 15.209 and 15.247. Addition to UPRR010047-02.**

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### **1.3. §15.209 (a) – Radiated emission (at TX band edges)**

The maximum RF power that is produced by the EUT is measured in an anechoic room in 1-meter distance.

#### **Measurement uncertainty:**

Field strength: **-4.2/+3.4 dB** (k = 2)

#### **Measurement results:**

The radiated emission test is performed using 1MHz BW. The plots of the noise levels at the TX band edges 2400,0MHz and 2483,5MHz can be found in annex 11 and 12.

Measurement shall be corrected for cable and antenna losses by adding 29dB to the values shown.

Corrected peak value is found to be < 84dBm @ 1-meter.

#### **Limit:**

All Radiated emission that falls in the restricted bands as defined in 15.205 (a) must comply with the radiated emission limits specified in 15.209.

Emission at the band edges complies with the peak limit of 84dBm (scaled to 1-meter distance)

#### **Conclusion:**

**The EUT complies with the given limit.**

Test performed by: FBOLL      Date: 23. June 2001

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## **2. List of instruments**

### **Radiated emission (Final > 1GHz) + RF conducted measurements:**

|               |             |       |                    |
|---------------|-------------|-------|--------------------|
| Test receiver | R&S ESMI-RF | 17643 | 9. May 00 / 2 Yr.  |
| Antenna 3     | EMCO 3115   | 15781 | 12. Feb.01 / 1 Yr. |

### **Support Equipment:**

Laptop PC : Compaq Armada 1530D

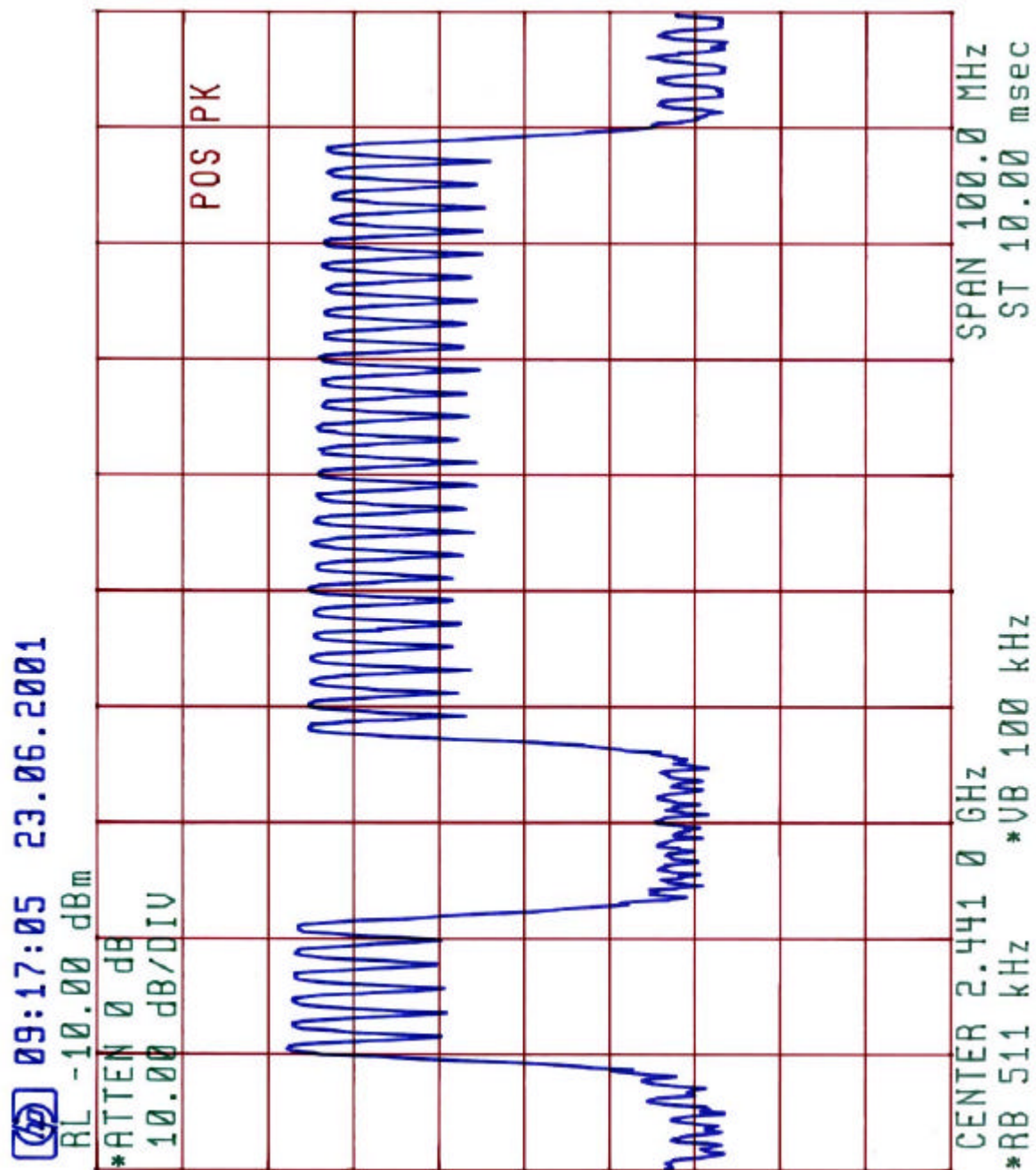
Bluetooth Link, PC end : MPI Tech Bluetooth dongle

Printer : HP DeskJet 850C

Title: Test on I-data Bluetooth printer adapter, to FCC Part 15 C clause 15.207, 15.209 and 15.247. Addition to UPRR010047-02.

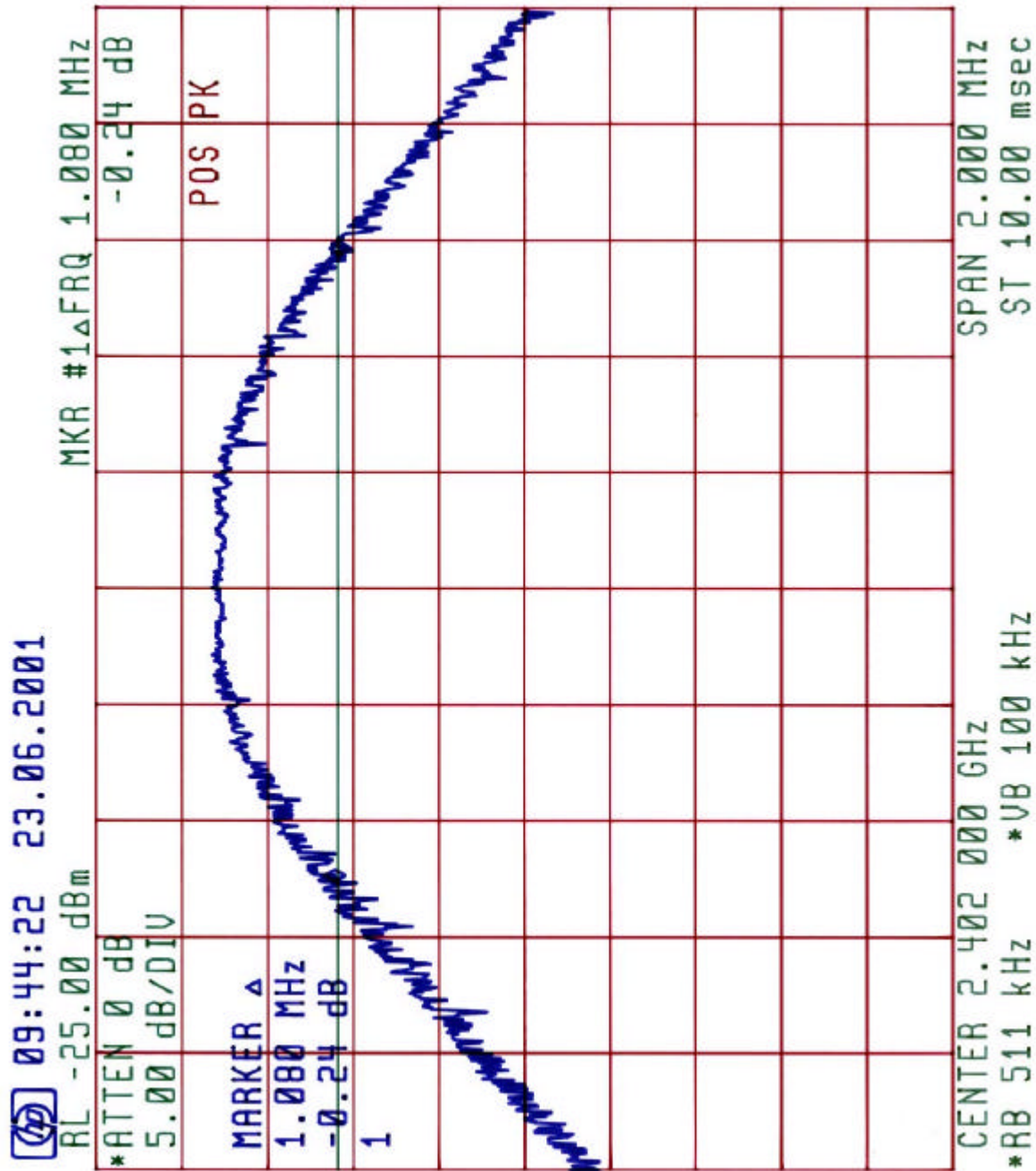
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Channels used in inquiry mode:



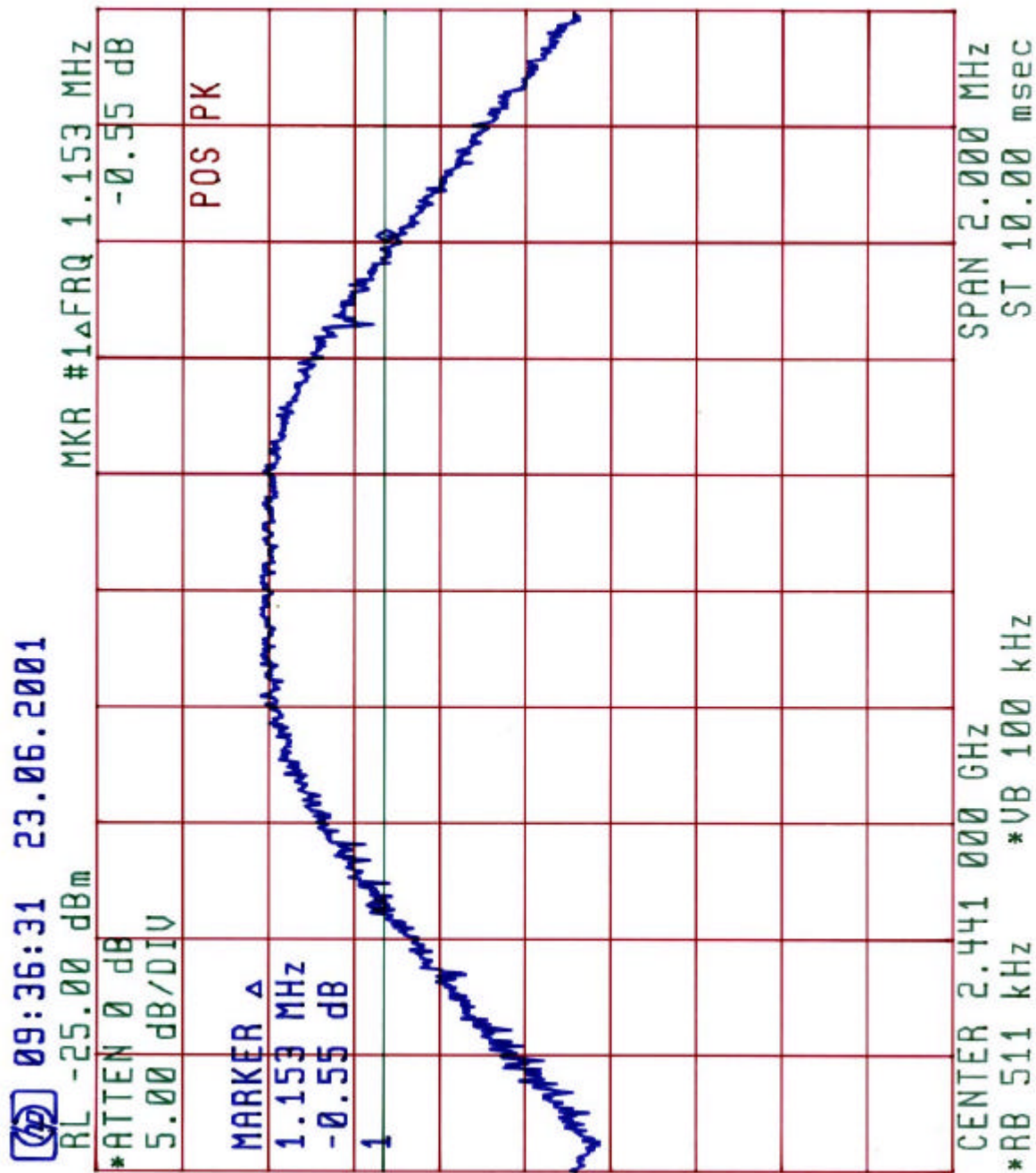
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Bandwidth, Inquiry mode, Low channel:



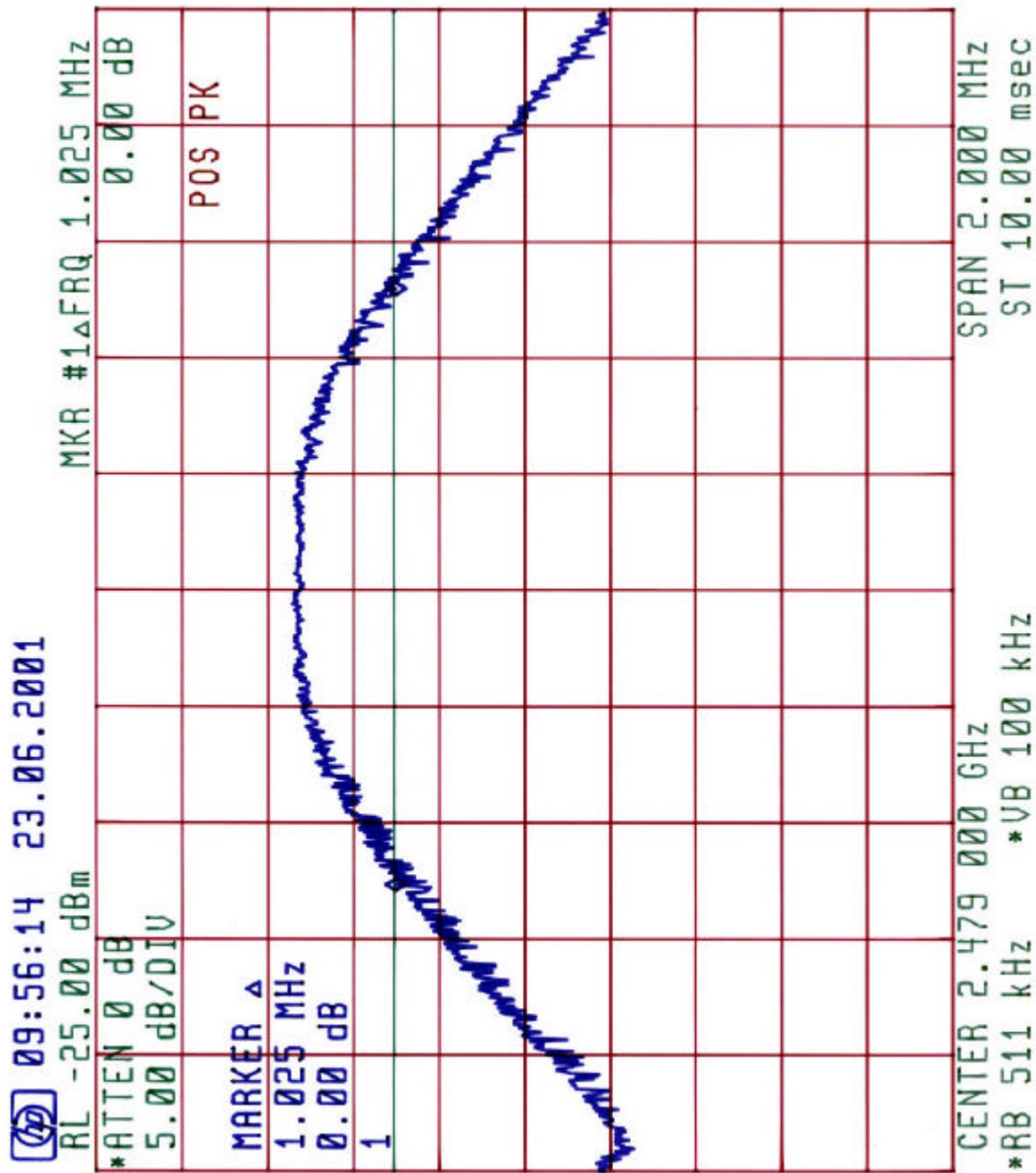
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Bandwidth, Inquiry mode, Center channel:



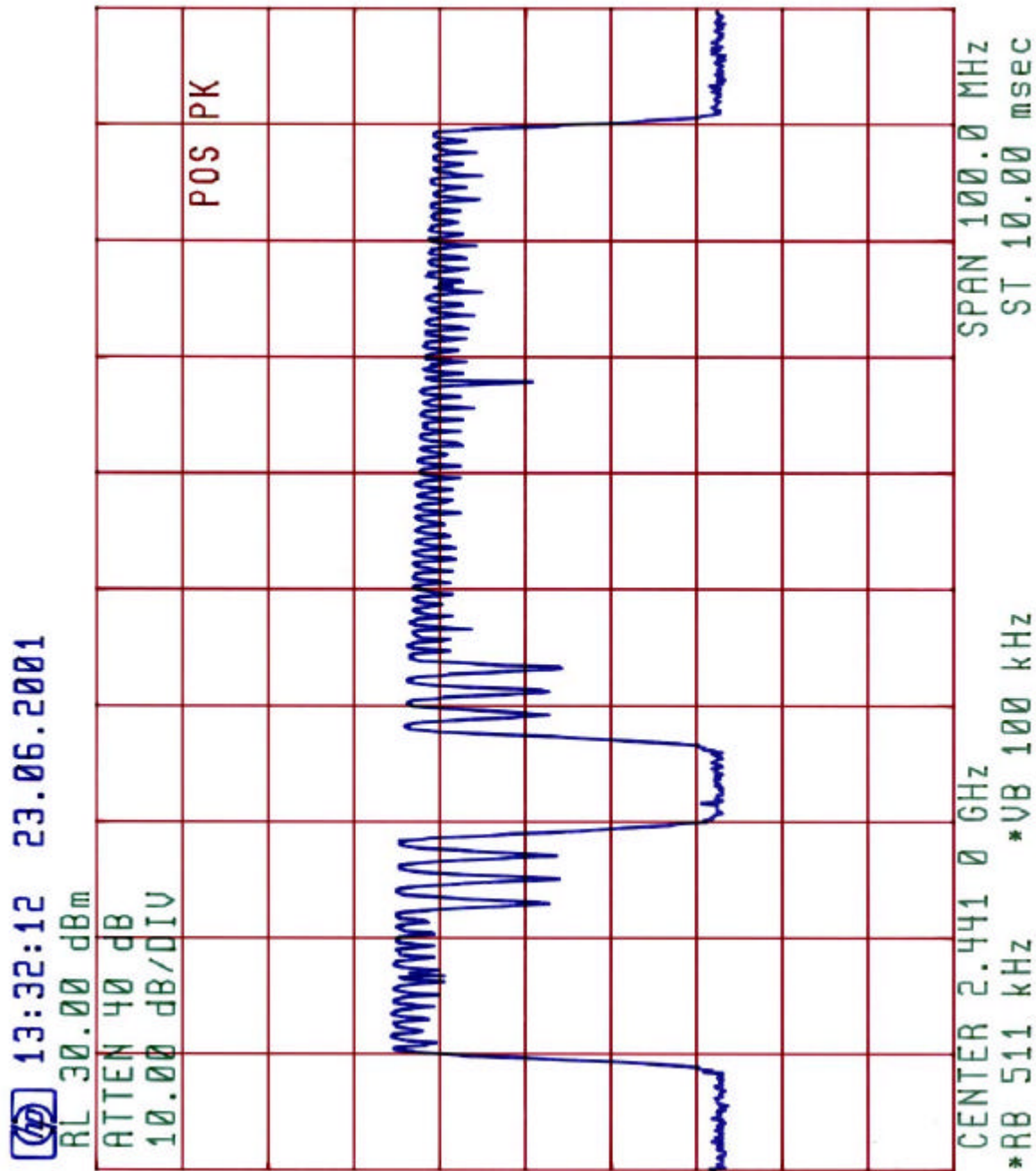
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Bandwidth, Inquiry mode, High channel:



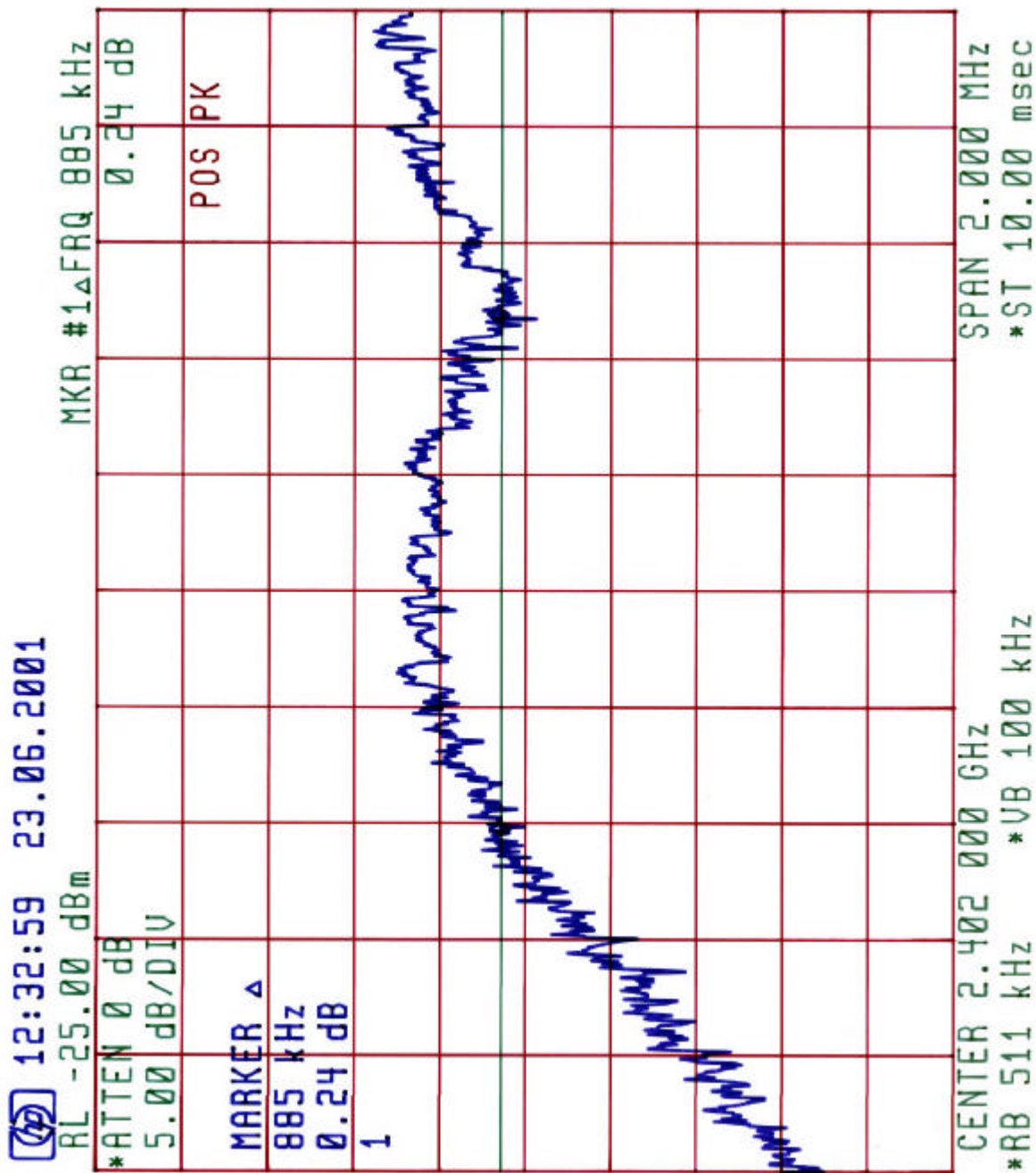
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Channel use page mode:



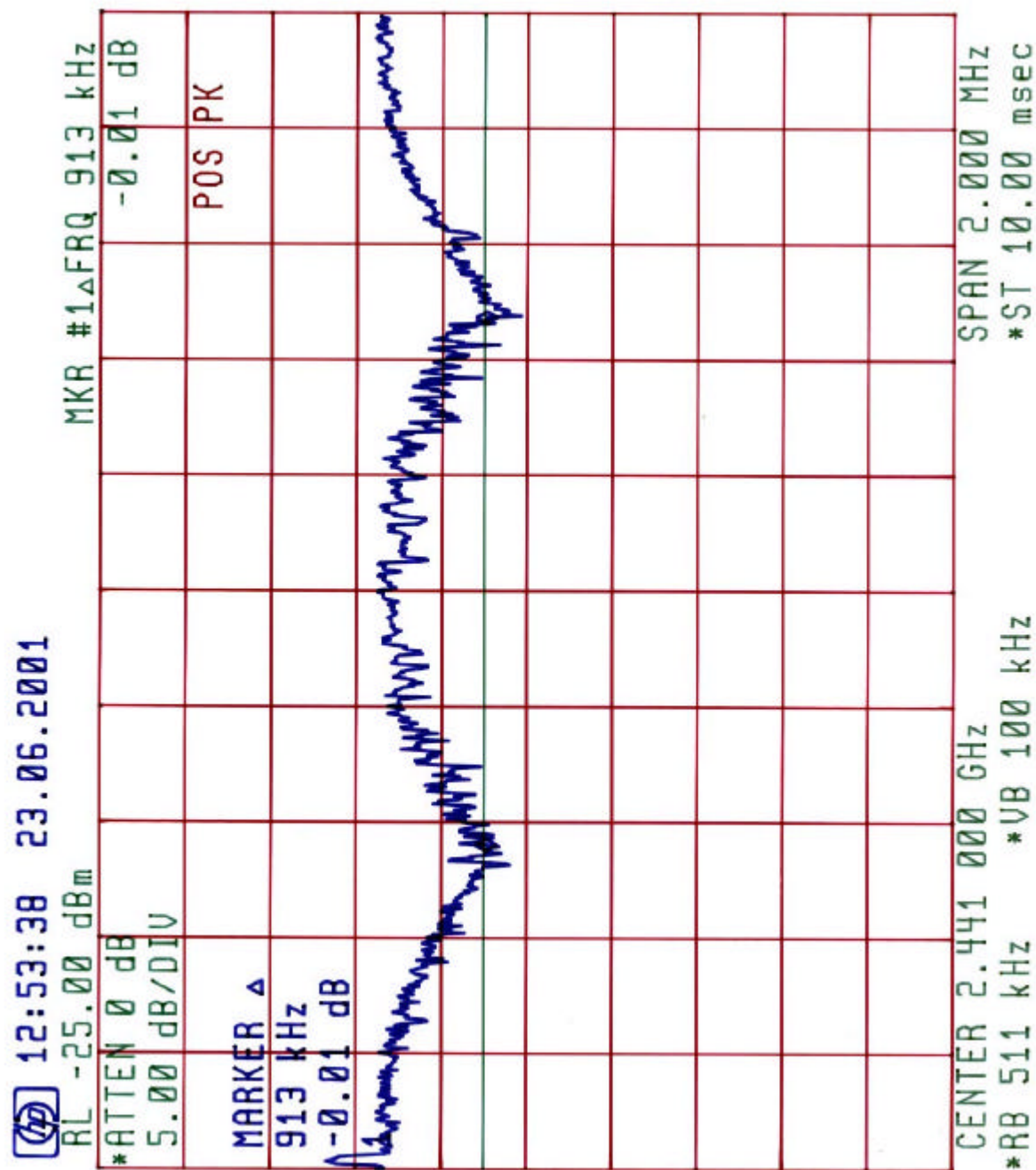
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Bandwidth, Page mode, Low channel:



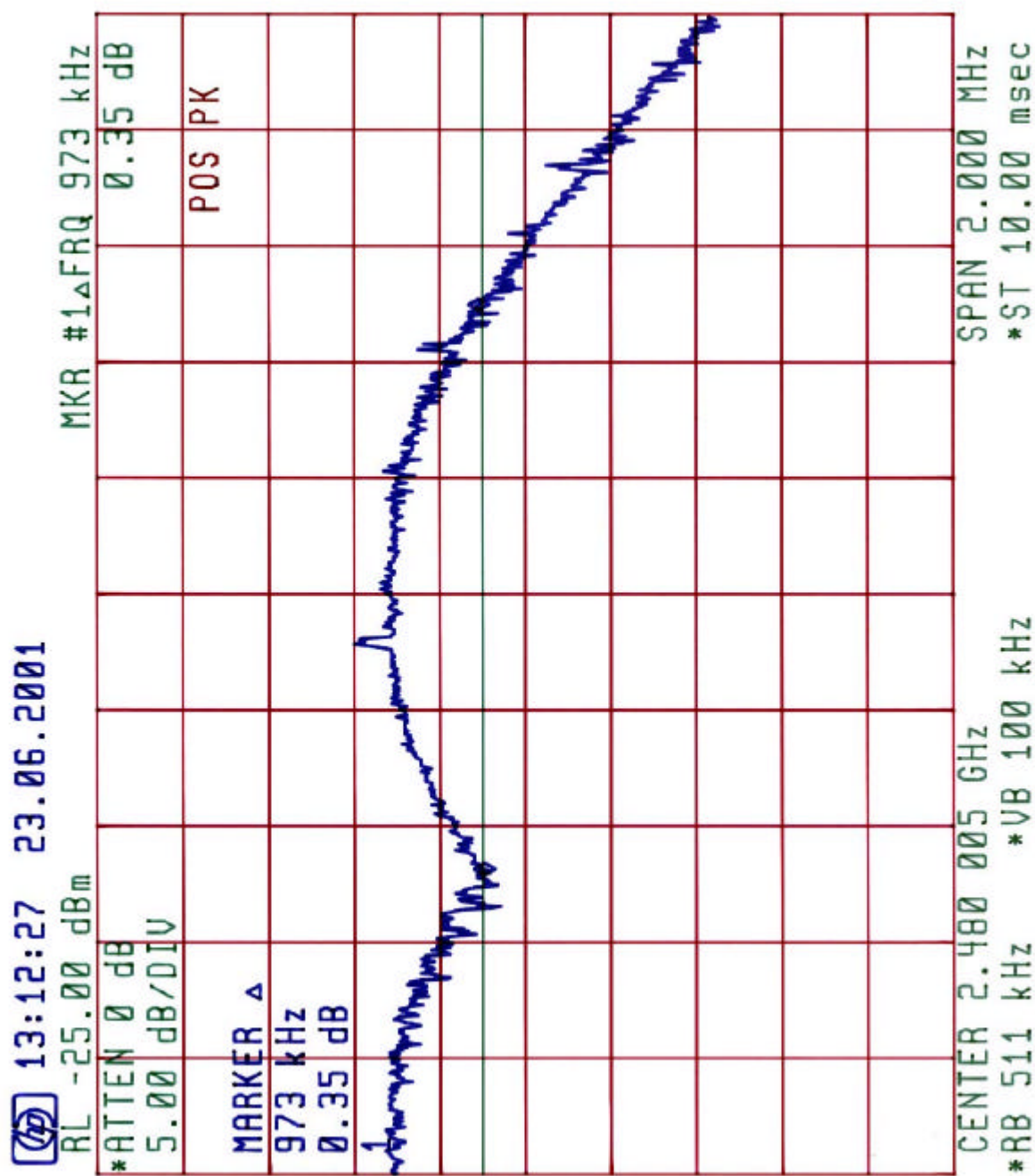
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Bandwidth, Page mode, Center channel:



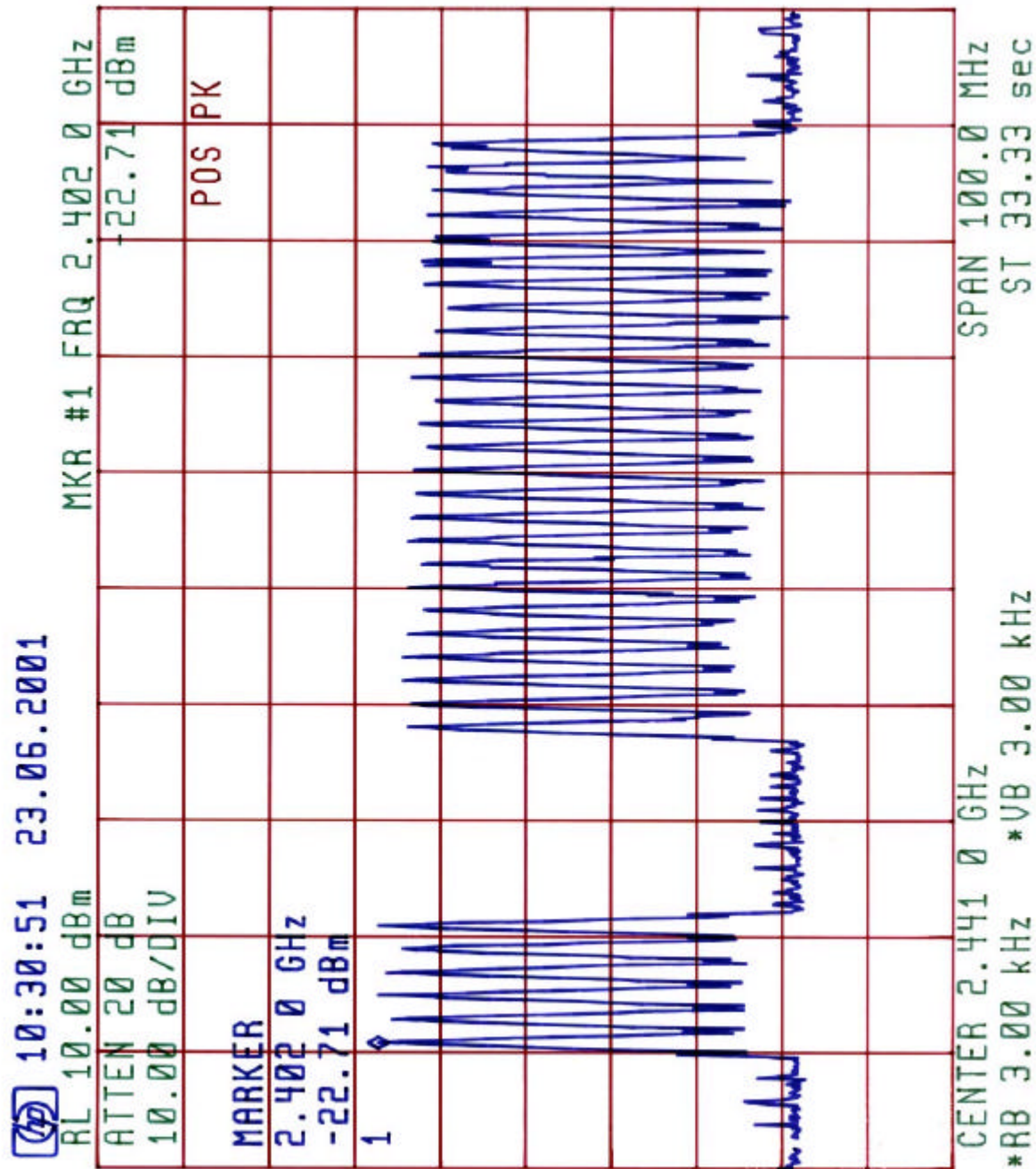
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Bandwidth, Page mode, High channel:



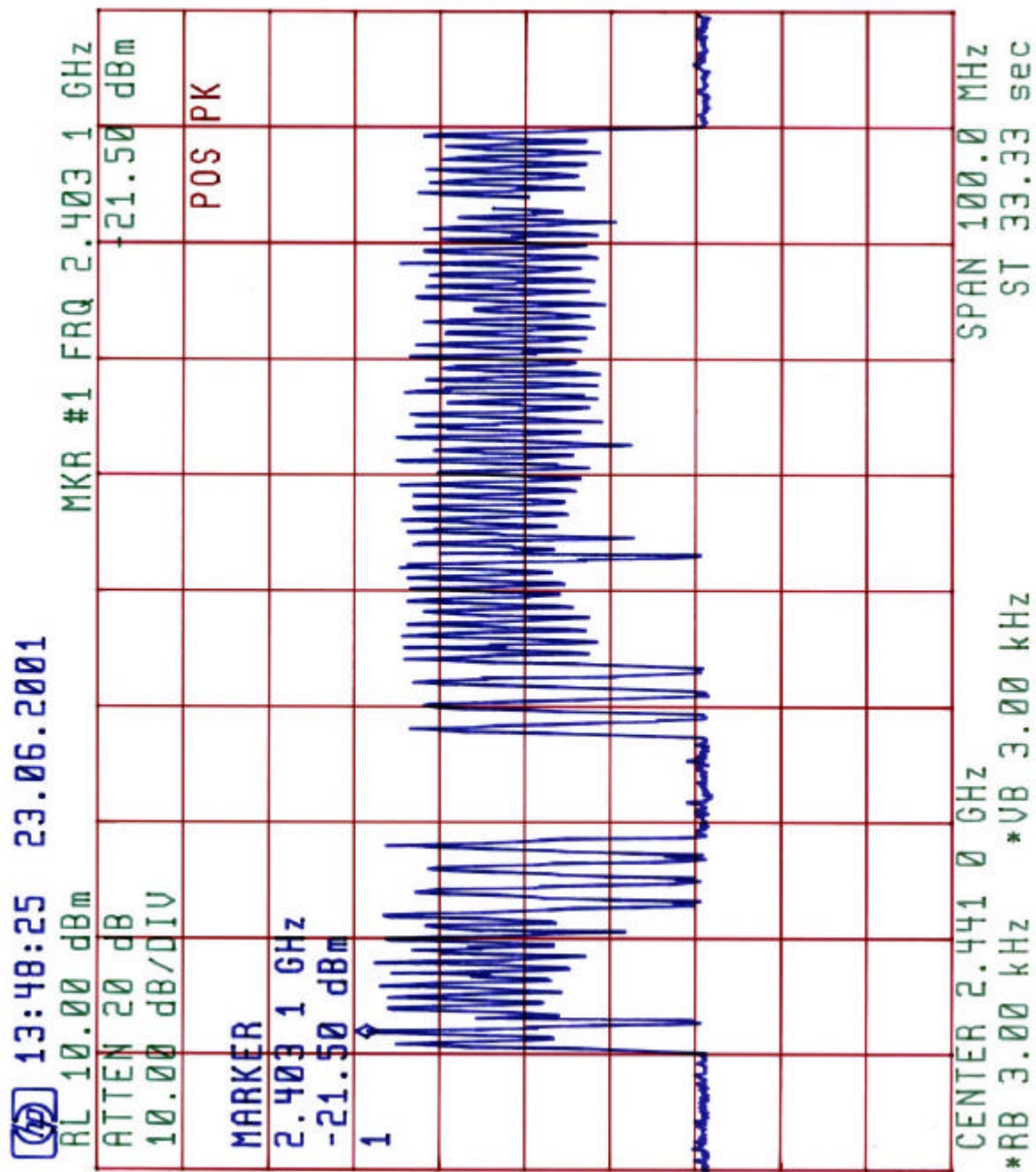
Title: Test on I-data Bluetooth printer adapter, to FCC Part 15 C clause 15.207, 15.209 and 15.247. Addition to UPRR010047-02.

Spectral power density, inquiry mode (scan over TX band):



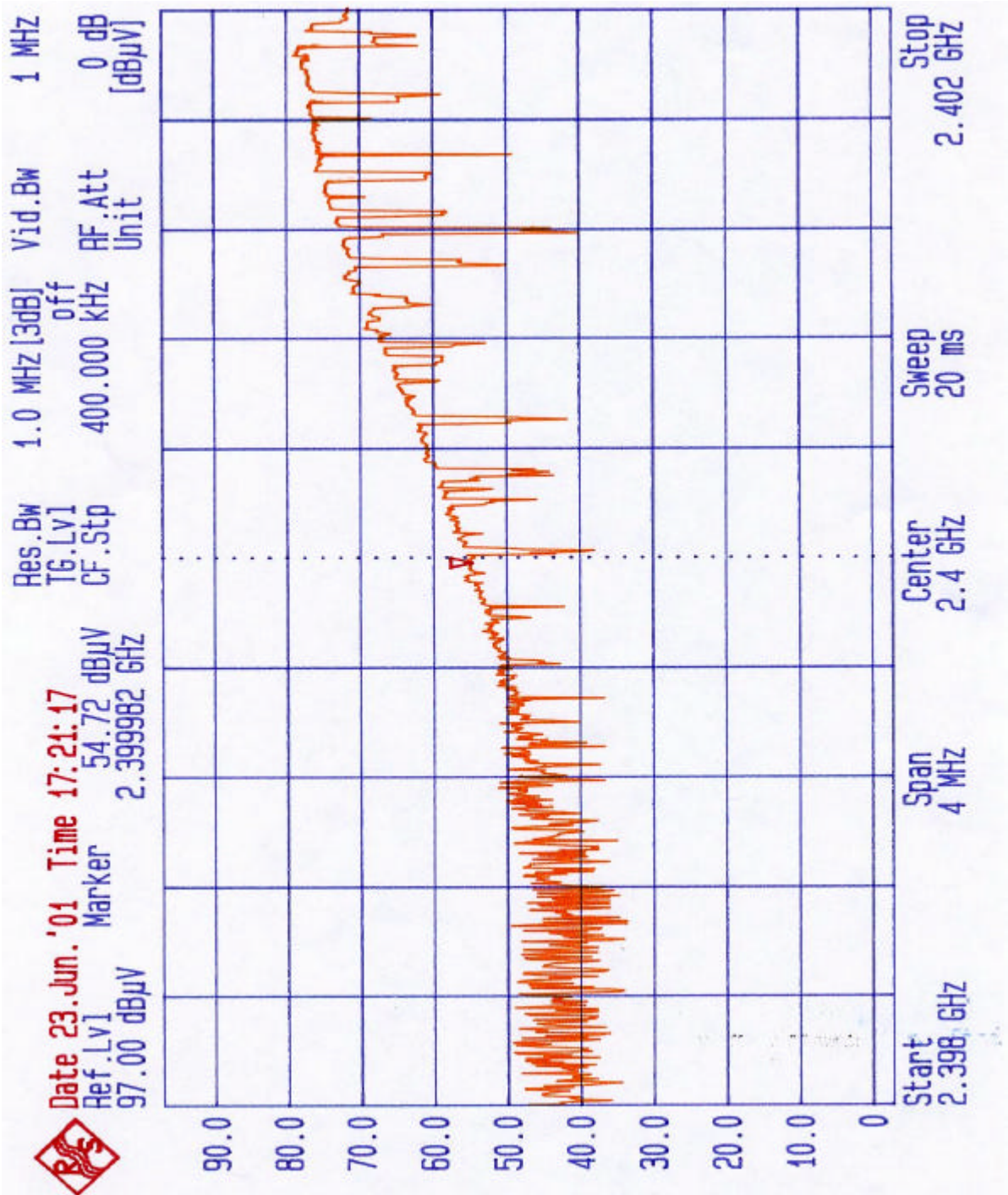
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Spectral power density, page mode (scan over TX band):



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Radiated emission at TX band edges (at 2400.0 MHz)



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Radiated emission at TX band edges (at 2483.5 MHz):

