

OCCUPIED BANDWIDTH COMPARISON WITH A DIGITAL SIGNAL

1. TEST SETUP

The PA's frequency was set to 936MHz and FM modulated with a 3 kHz 50% duty cycle square wave at a 5kHz deviation. The output power was set to 125W.

2. RESULTS

Occupied bandwidth was measured at the input and output of the PA with reference to the unmodulated carrier. As can be seen from figure 1 and 2, the input and output occupied bandwidth is identical.

ANTENNA TERMINAL SPURIOUS EMISSIONS

1. TEST SETUP

The PA's frequency was set to 936MHz and FM modulated with a 3 kHz 50% duty cycle square wave at a 5kHz deviation. The output power was set to 125W.

2. RESULTS

In accordance with paragraph 90.209 (b), the mean power of emissions must be attenuated below the mean power of the unmodulated carrier (P) on any frequency removed from the assigned frequency by more than 250% of the authorized bandwidth:

At least $43 + 10\log(P)$ or -13dBm

The antenna terminal spurious emissions were measured up to 10th harmonic and plotted in figure 3, 4 and 5.

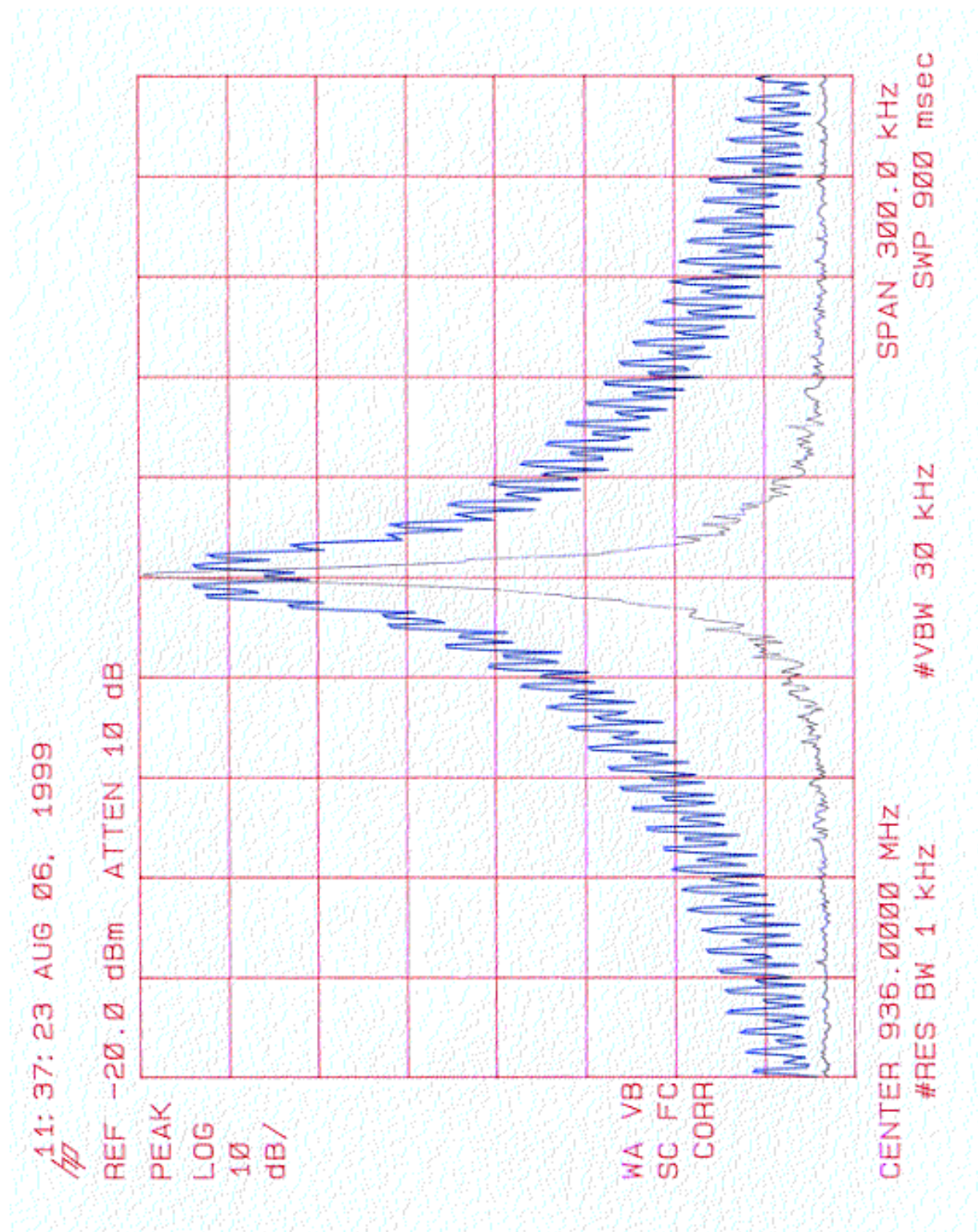


Figure 1. Occupied Bandwidth, Input

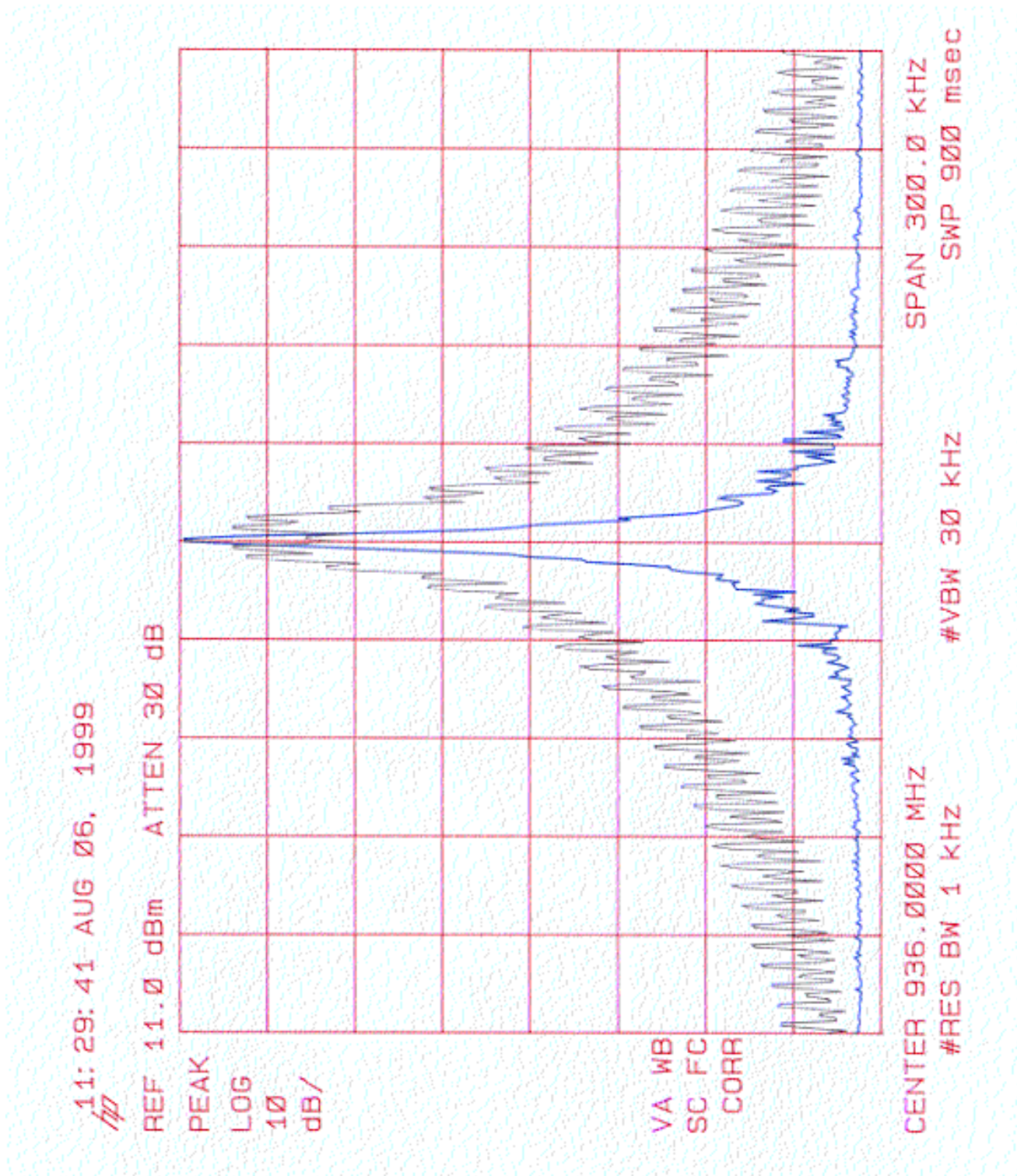


Figure 2. Occupied Bandwidth, Output



Figure 4. Antenna Terminal Spurious Emissions, 30-1000 MHz

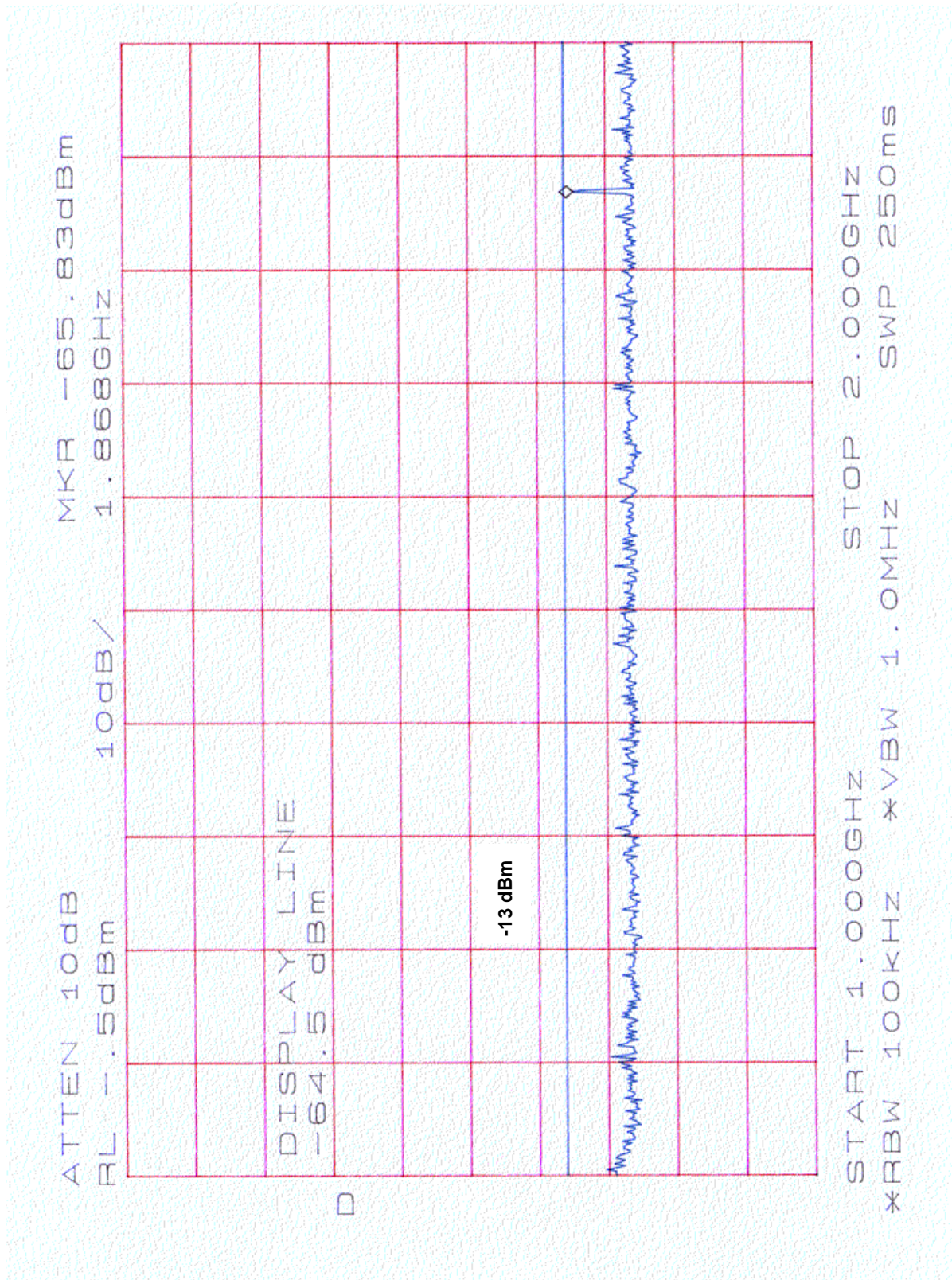


Figure 4. Antenna Terminal Spurious Emissions, 1000-2000 MHz

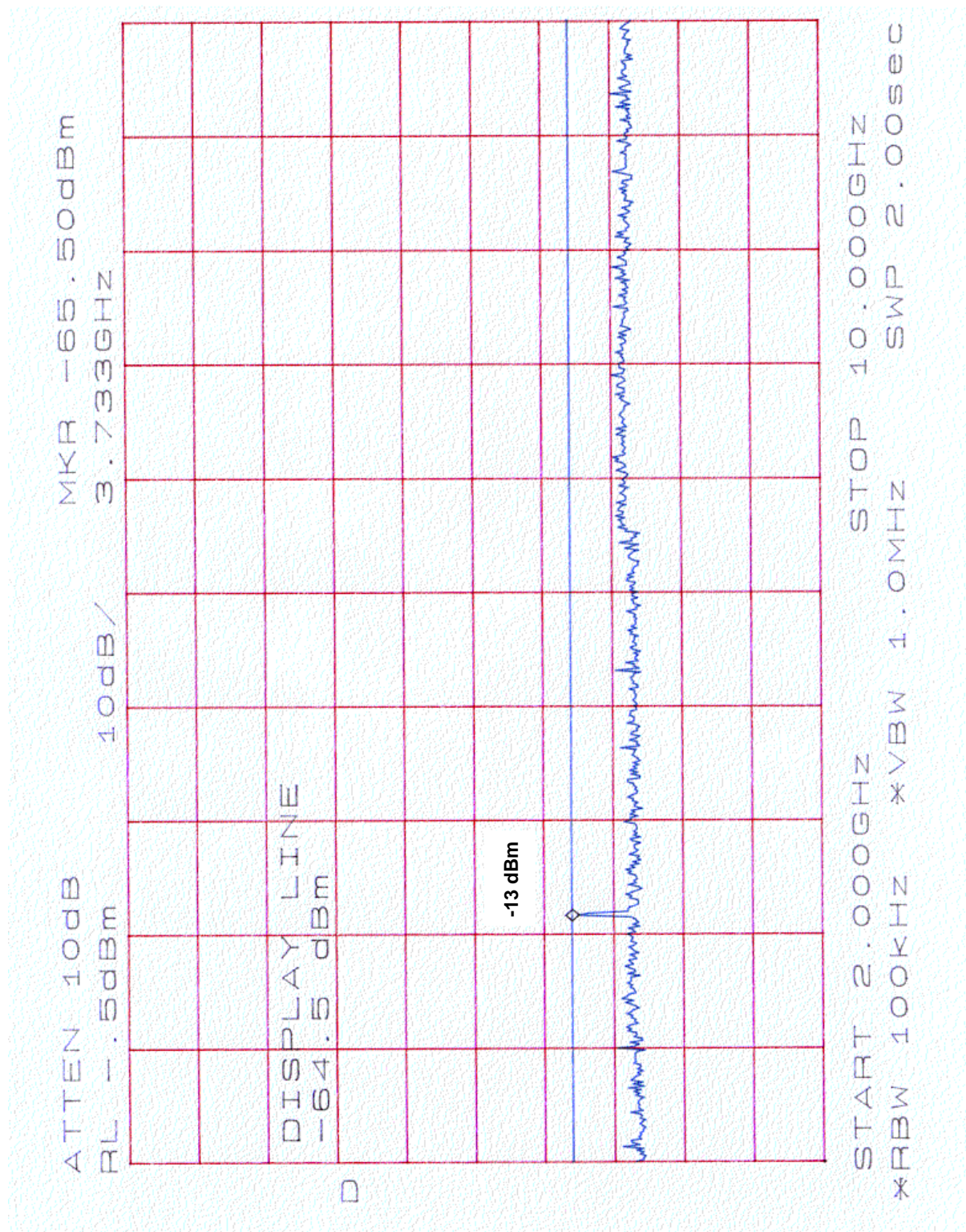


Figure. 5 Antenna Terminal Spurious Emissions, 2000-10000 MHz