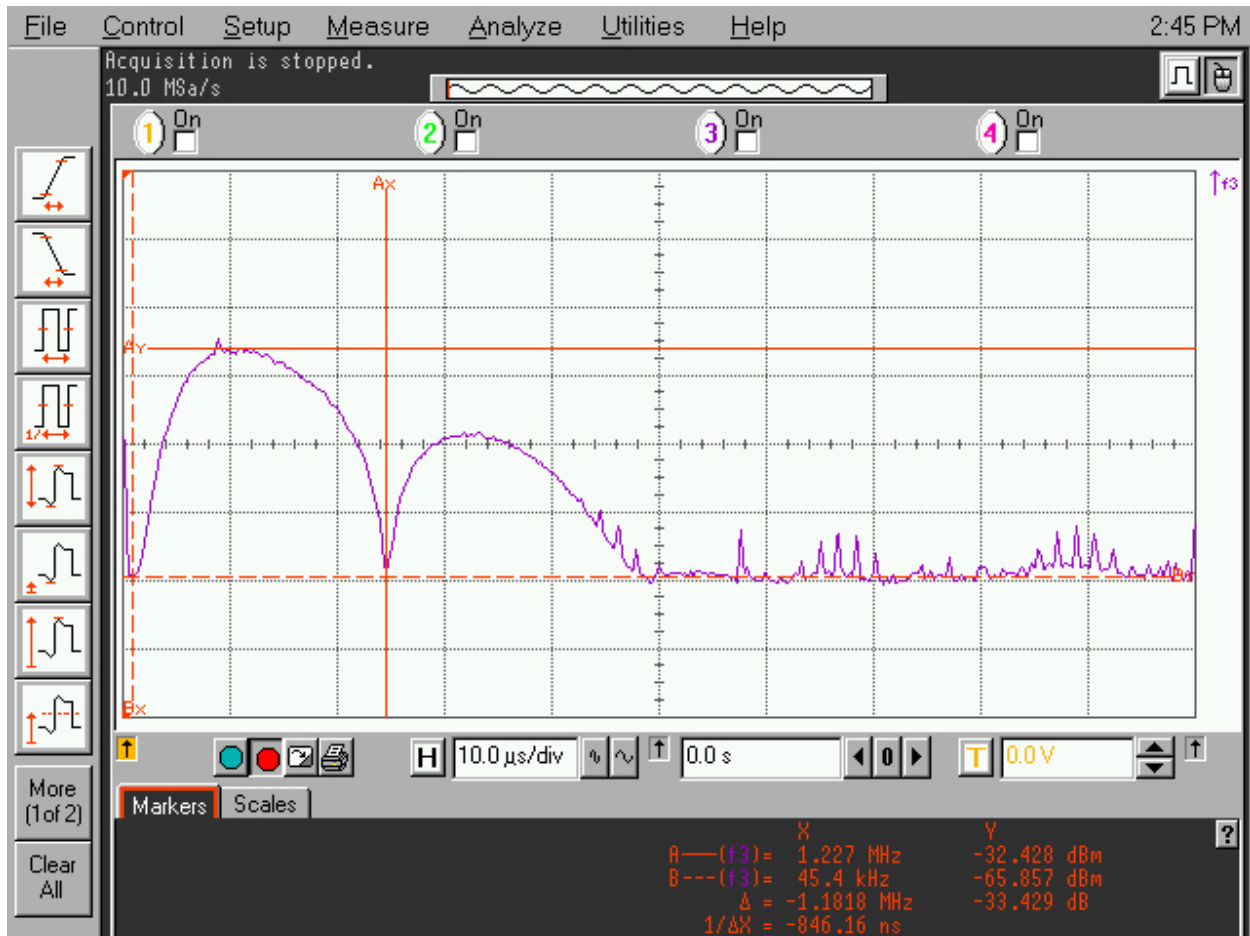


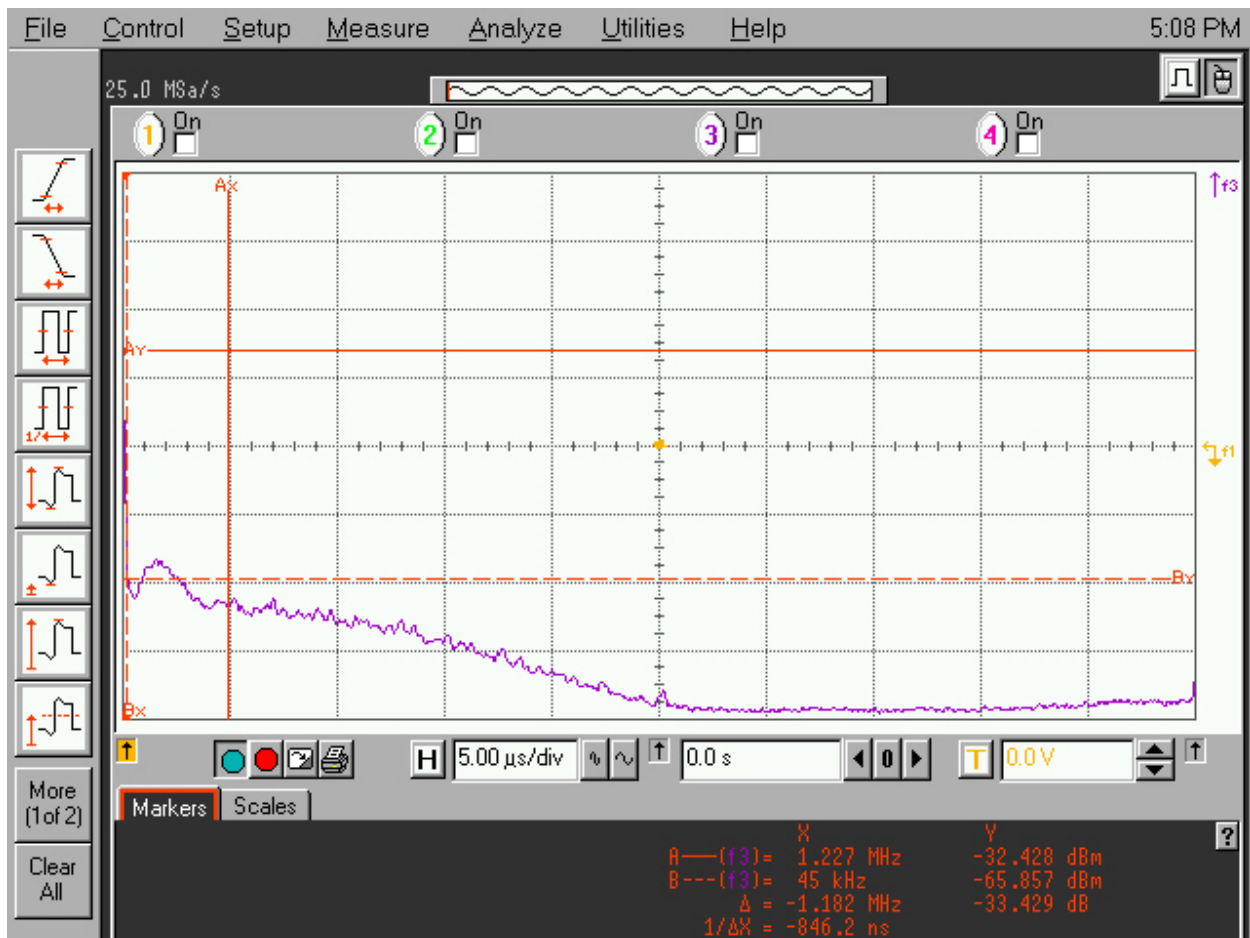
Mike,

This is the spectrum coming out of the OMAP L138 using standard cabling. The system is sampling at 10 MHz and the first null is at 1.227 MHz. This reminds me of the spectrum of a bipolar return to zero (also called alternate mark inversion, AMI) signaling at about 1.2 Mbps. The “spectral dip” near baseband could also be caused by the reconstruction filter associated with the DAC.

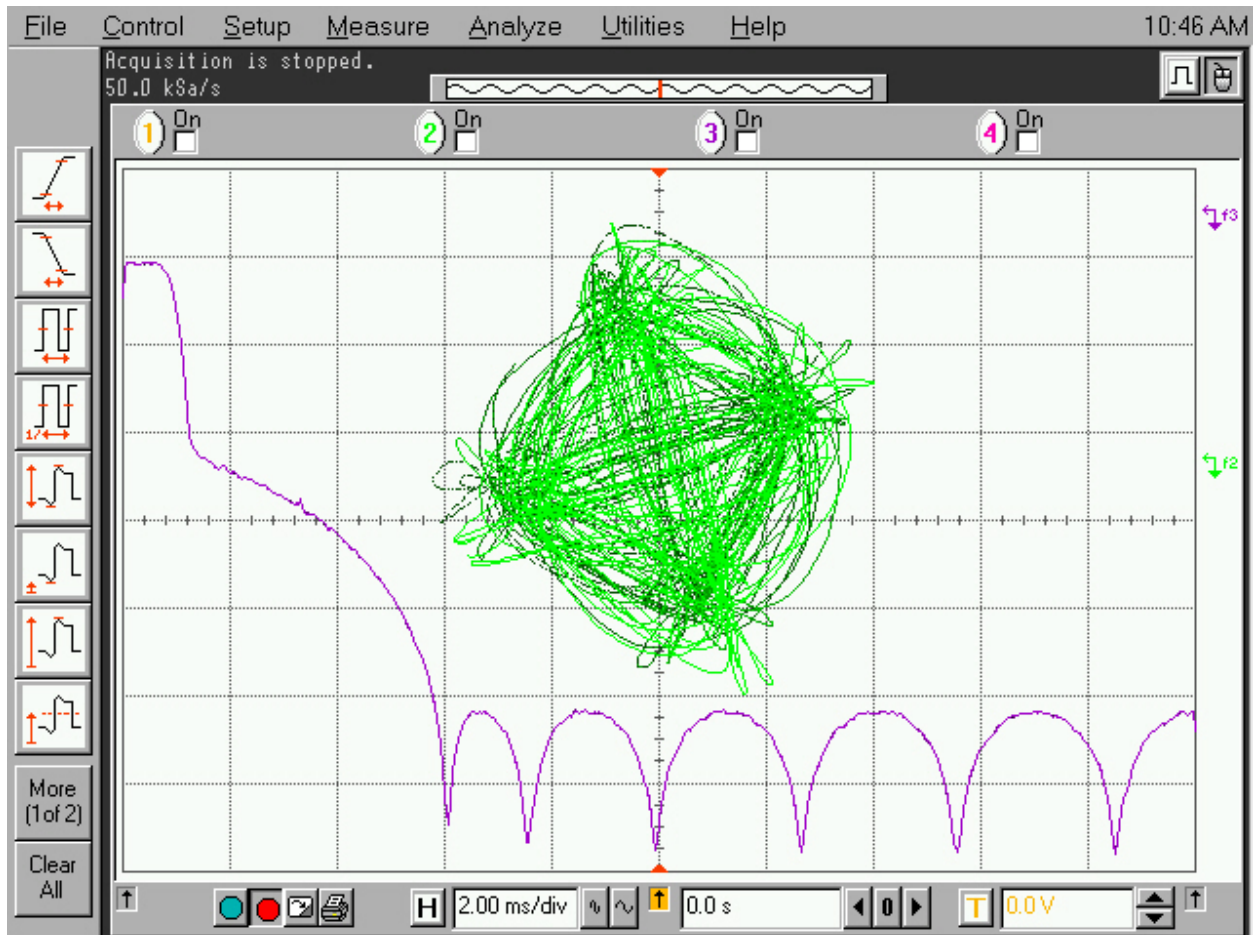


The screenshot displays a Spectrum Analyzer interface with a grid background. A signal spectrum is visible, showing a peak at approximately 1.227 MHz. The interface includes a top menu bar with options: File, Control, Setup, Measure, Analyze, Utilities, and Help. The top status bar shows the time 5:08 PM. The main display area is divided into four quadrants, each with a channel selector (1, 2, 3, 4) and a 'On' button. The left side of the interface features a vertical toolbar with various waveform and measurement icons. The bottom status bar displays the following information:

- Scale: 5.00  $\mu$ s/div
- Time: 0.0 s
- Frequency: 0.0 V
- Markers: Markers Scales
- Measurements:
  - A—(f3) = 1.227 MHz
  - B---(f3) = 45 kHz
  - $\Delta$  = -1.182 MHz
  - 1/ $\Delta$ X = -846.2 ns



This is the unstabilized (timing has not been established/recovered) output of my QPSK receiver. The phase trajectory is shown in green and one of the two channel's spectrum is shown in purple. I have an  $F_s/20$  filter turned on. This filter causes the roll-off and the repeating nulls. Had this filter not been activated, a flat noise floor above the center of the display would have been present.



This is the same setup with the filters in the circuit. Notice about 30 dB of attenuation (10 dB/division).

