

Test protocol

Anti-aliasing filter attenuation

Description: Test the attenuation of the anti-aliasing filter on the system input. The anti-aliasing filter was connected to a signal generator and the filter output was read with an oscilloscope. Filter should have 3dB attenuation at around 19-20 kHz.

Equipment:

- Nexys 4 board with implemented design
- +/- 15V power supply
- 5V power supply
- Oscilloscope
- Signal generator

Setup: Signal generator connected to the input. One oscilloscope channel on the filter input and one on the filter output.

Results: The output was attenuated by 3 dB around 21 kHz. This is a little higher than the design suggested but below the critical 24 kHz (48 kHz sampling freq.). The test was successful and no further improvements were made.