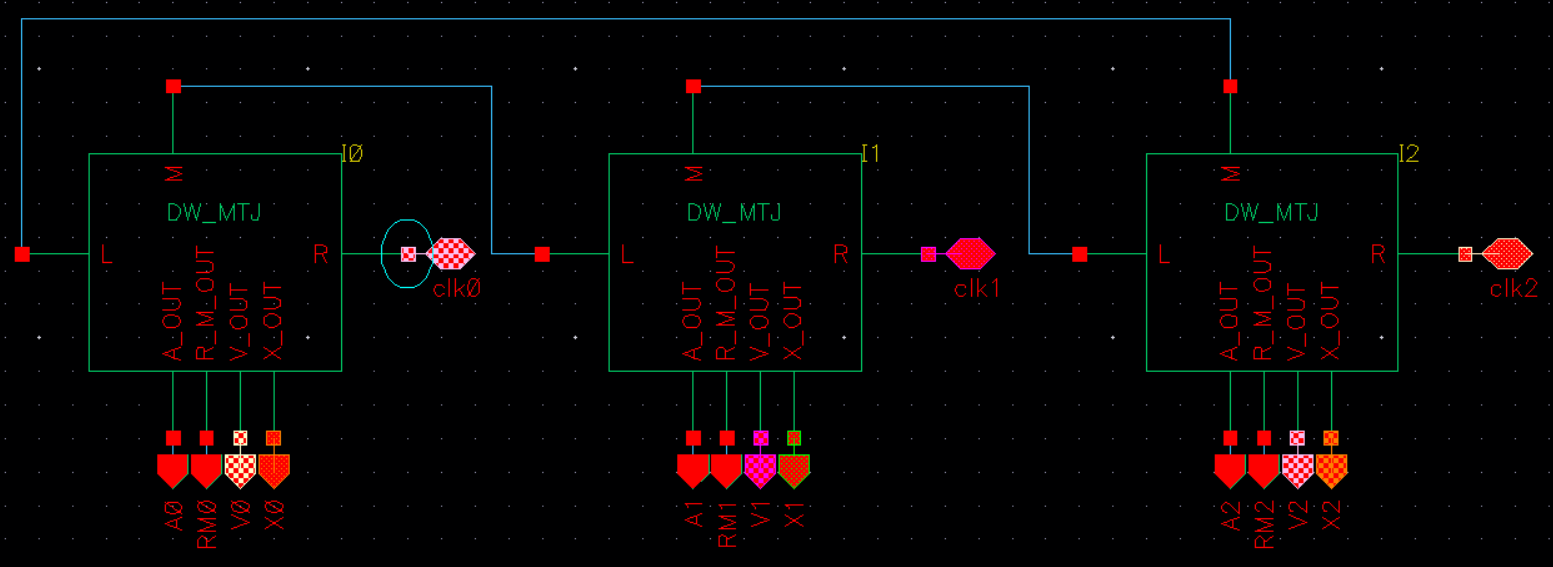


Schematic using sky130 process. All dwmtj model parameters are default. If you manage to get the included tarball loaded in virtuoso, it’s worth diffing the DW\_MTJ/veriloga with that on the github. The github will be the most up to date.



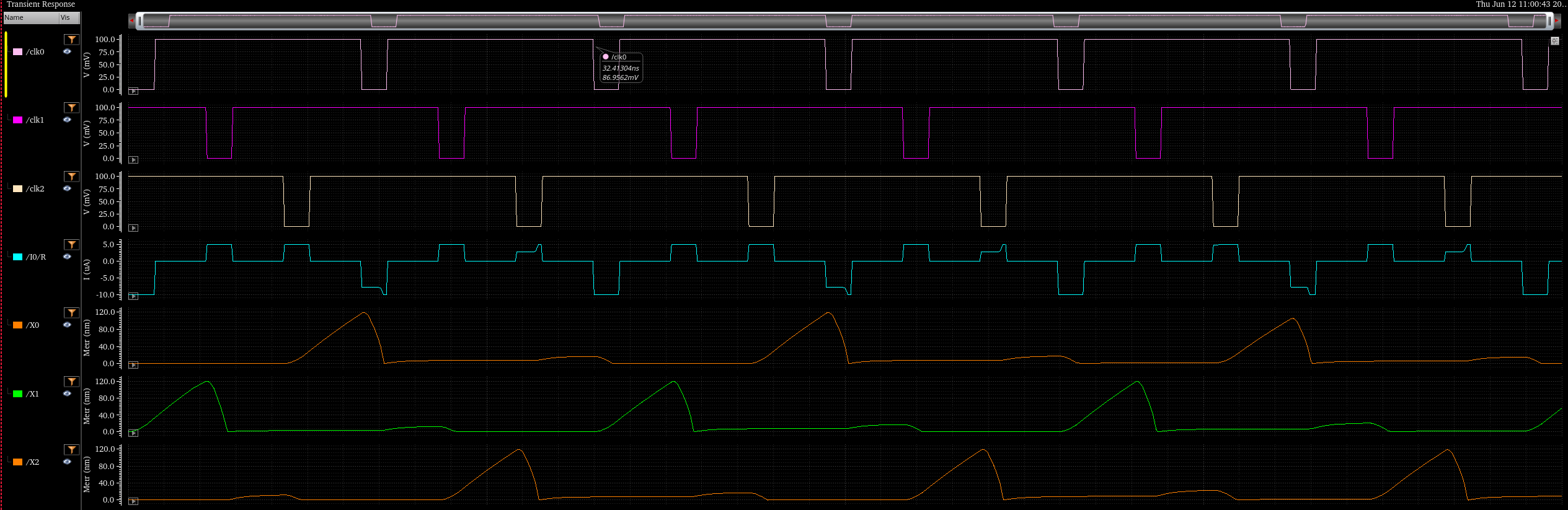
Waveform. Stimuli file included as \_graphical\_stimuli.test\_1.txt, Vin = 5mV

DWMTJ pulsed ring oscillator mirroring that described in [1]:



Pinning and MTJ parameters were tweaked slightly from the default values.

Resultant waveform demonstrating the same ring oscillator functionality as [1]:



Stimuli file included as \_graphical\_stimuli.ring\_osc.txt, vdd = 100 mV, period = 1.8 ns

[1] X. Hu, A. Timm, W. H. Brigner, J. A. C. Incorvia, J. S. Friedman, [SPICE-Only Model for Spin-Transfer Torque Domain Wall MTJ Logic](https://personal.utdallas.edu/~joseph.friedman/Papers/HuDWMTJTED2019.pdf), IEEE Transactions on Electron Devices 66:6, 2817-2821 (2019)