Power Input and Protection

5V Output Regulator

Board Harnesses

Testpoints

Decoders

Column Drivers

Row Drivers

Pulse Protection

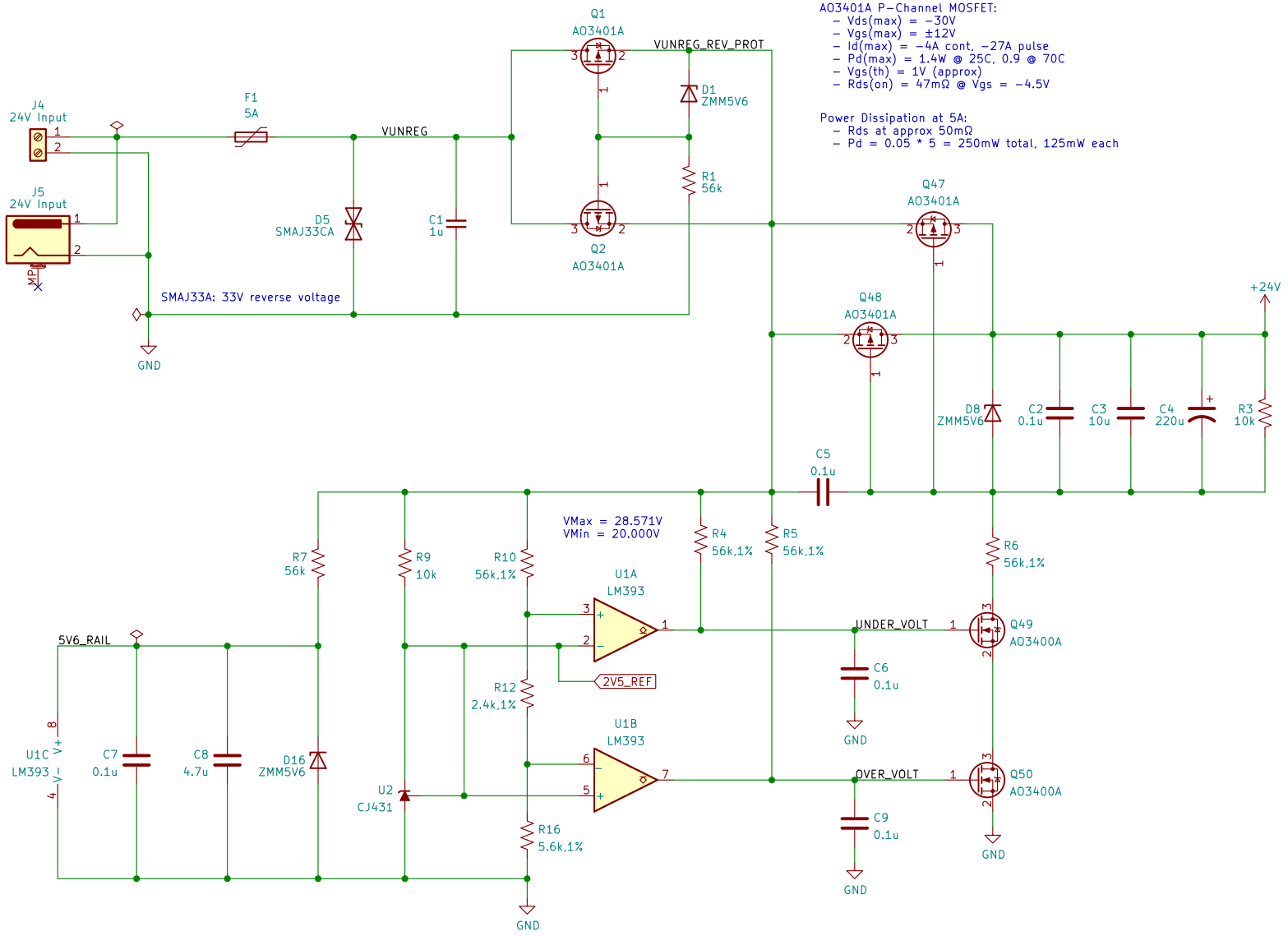
Shift Registers

Indicator LEDs

Sheet: /
File: FlippyDriver.kicad_sch

Title: Luminator MAX3000 Custom Driver Board

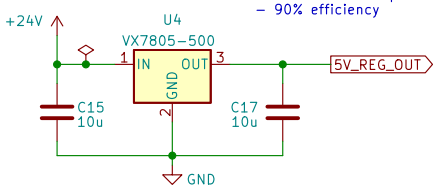
Size: USLetter	Date: 2023-03-21	**Rev: E**
KiCad E.D.A. kicad (6.0.0-0)		Id: 1/11



Input Power Protection:
- Vin range of 20V – 28V, Nominal 24V
- Max Current 5A
- Reverse Polarity Protected

Sheet: /Power Input and Protection/	
File: PowerInput.kicad_sch	
Title: Luminator MAX3000 Custom Driver Board	
Size: USLetter | Date: 2023-03-21	**Rev: E**
KiCad E.D.A. kicad (6.0.0-0)	Id: 2/11

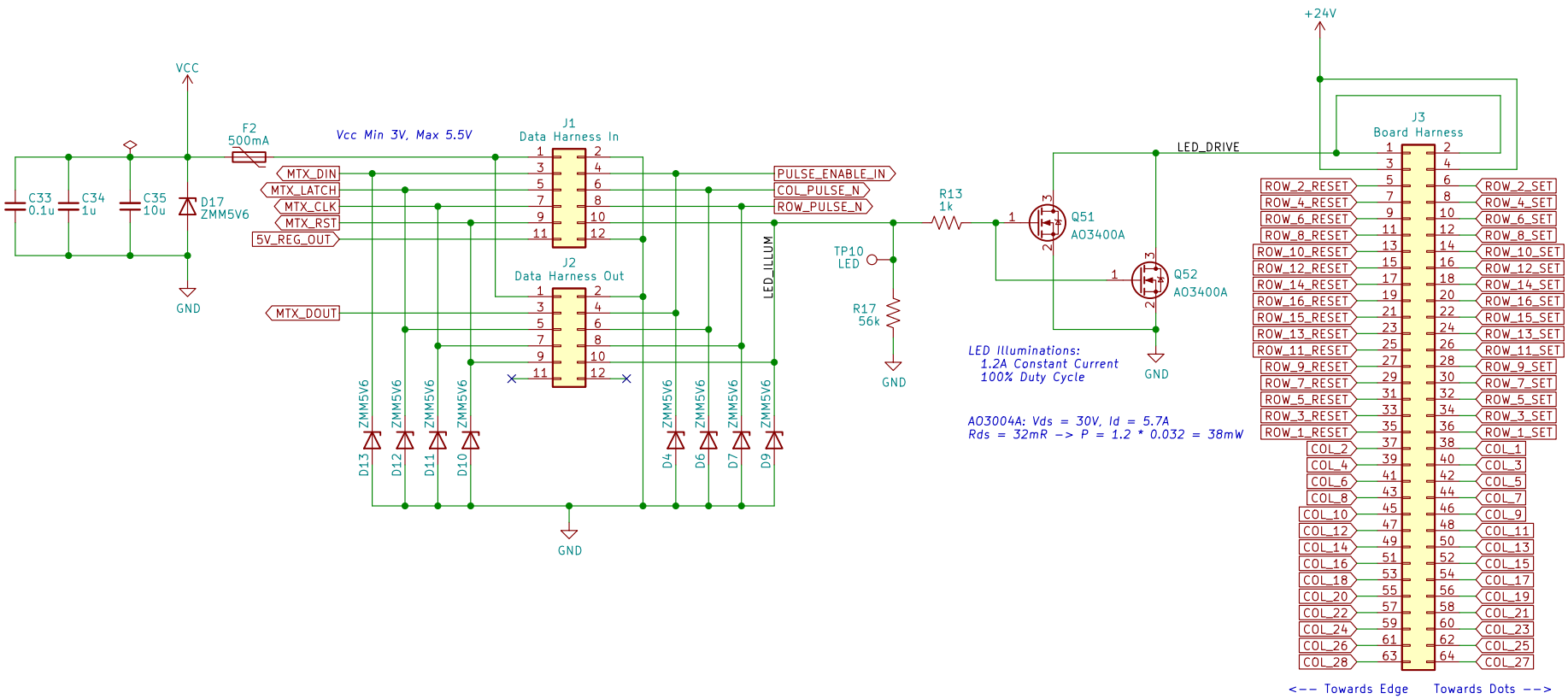
VX7805-500 Switcher Module at 24V:
- Vdc range of 6.5V to 36V
- Output 5V, 75mVpp
- 500mA max output current
- 90% efficiency



Sheet: /5V Output Regulator/
File: 5V_Reg.kicad_sch

Title: Luminator MAX3000 Custom Driver Board

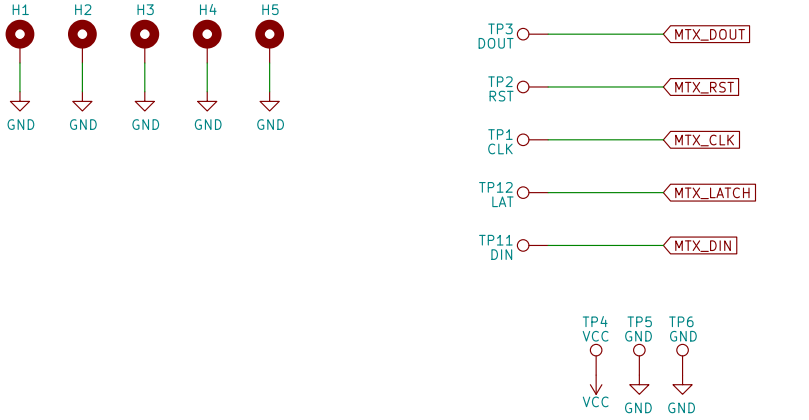
Size: A4	Date: 2023-03-21	**Rev: E**
KiCad E.D.A. kicad (6.0.0-0)		Id: 3/11



Sheet: /Board Harnesses/
File: BoardHarnesses.kicad_sch

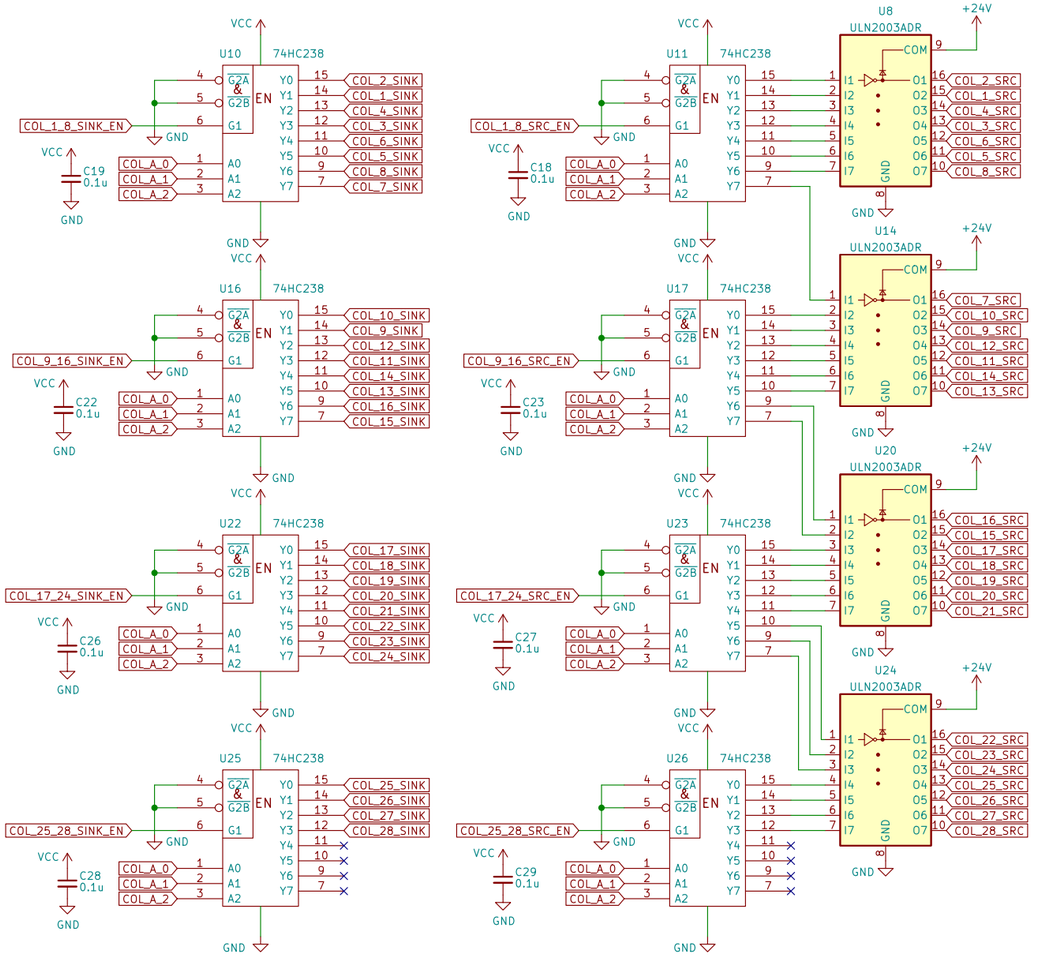
Title: Luminator MAX3000 Custom Driver Board

Size: A4	Date: 2023-03-21	**Rev: E**
KiCad E.D.A. kicad (6.0.0-0)		Id: 4/11

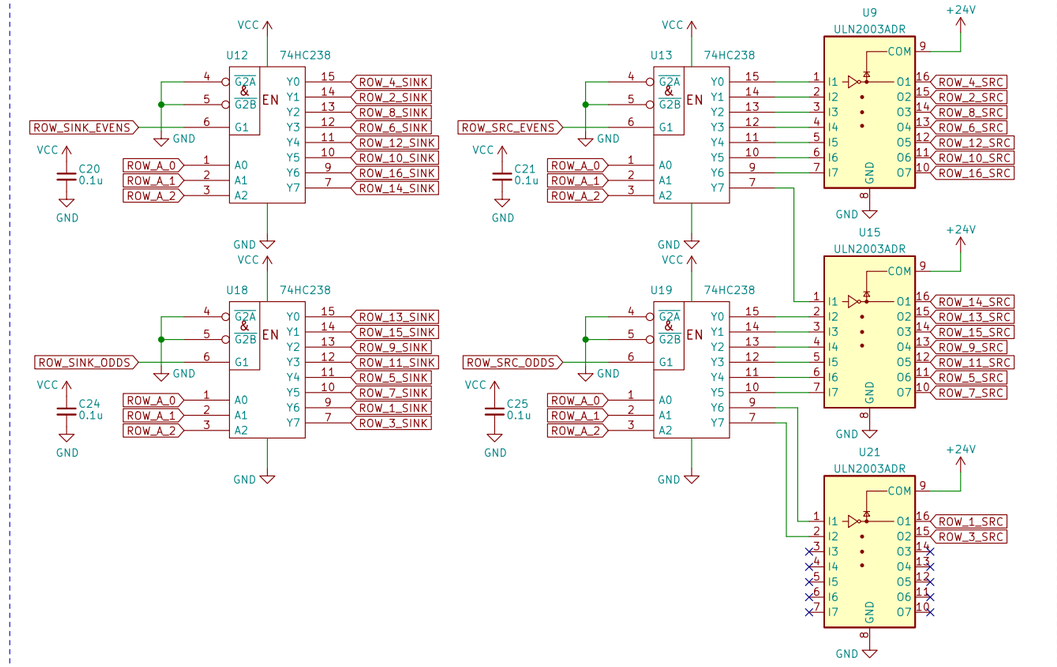


Sheet: /Testpoints/		
File: Testpoints.kicad_sch		
Title: Luminator MAX3000 Custom Driver Board		
Size: A4	Date: 2023-03-21	**Rev: E**
KiCad E.D.A. kicad (6.0.0-0)		Id: 5/11

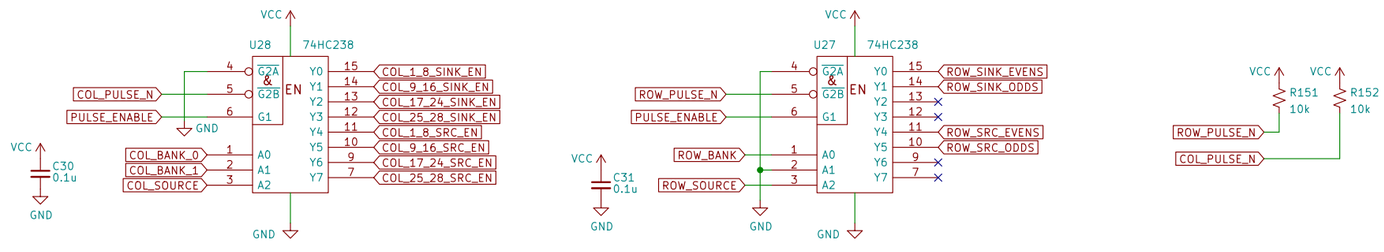
Column Banks



Row Banks



Bank Decoders



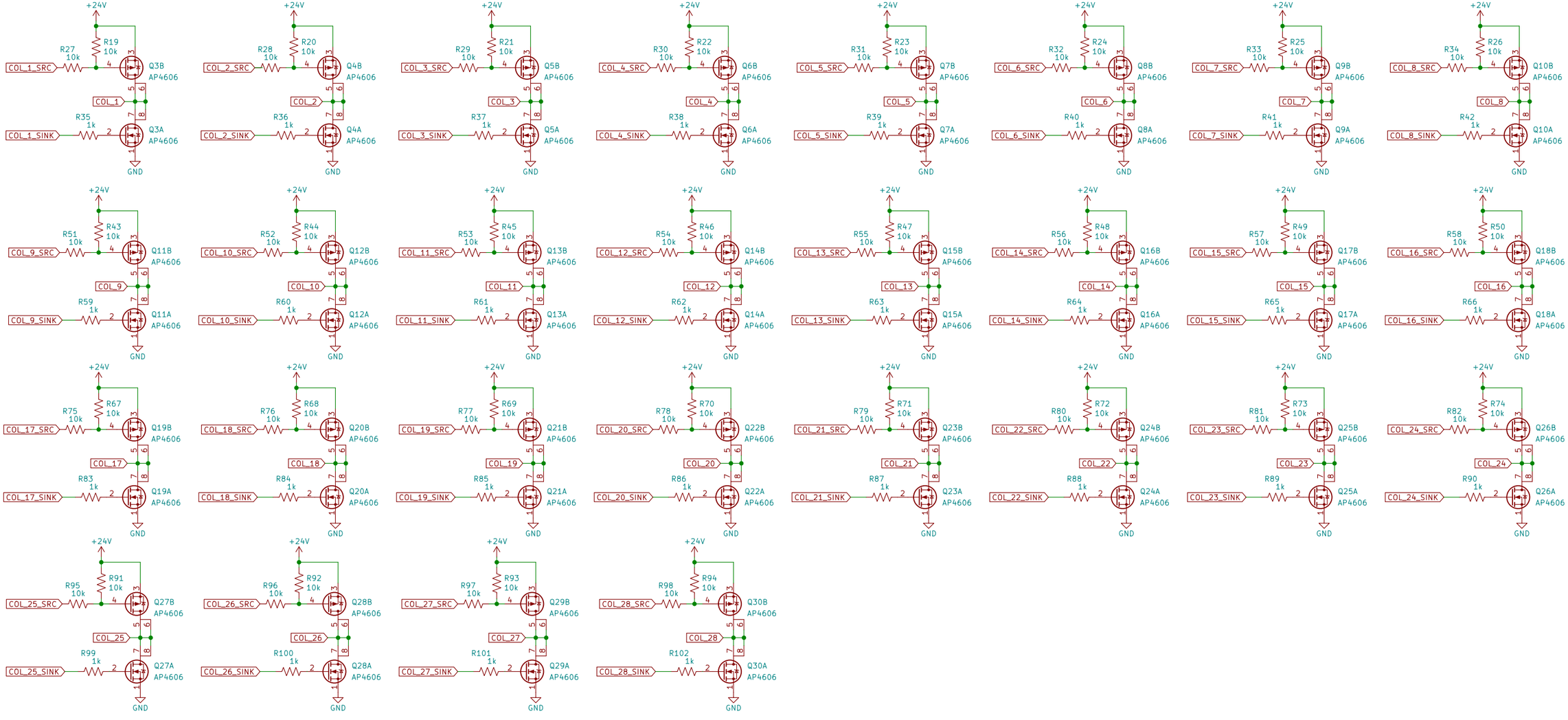
Order of Sink/Source lines is done to make routing cleaner

WARNING: Sink MUST be turned off before Source!
To RESET, current flows from COL to ROW_RESET
To SET, current flows from ROW_SET to COL

Sheet: /Decoders/
File: Decoders.kicad_sch

Title: Luminator MAX3000 Custom Driver Board

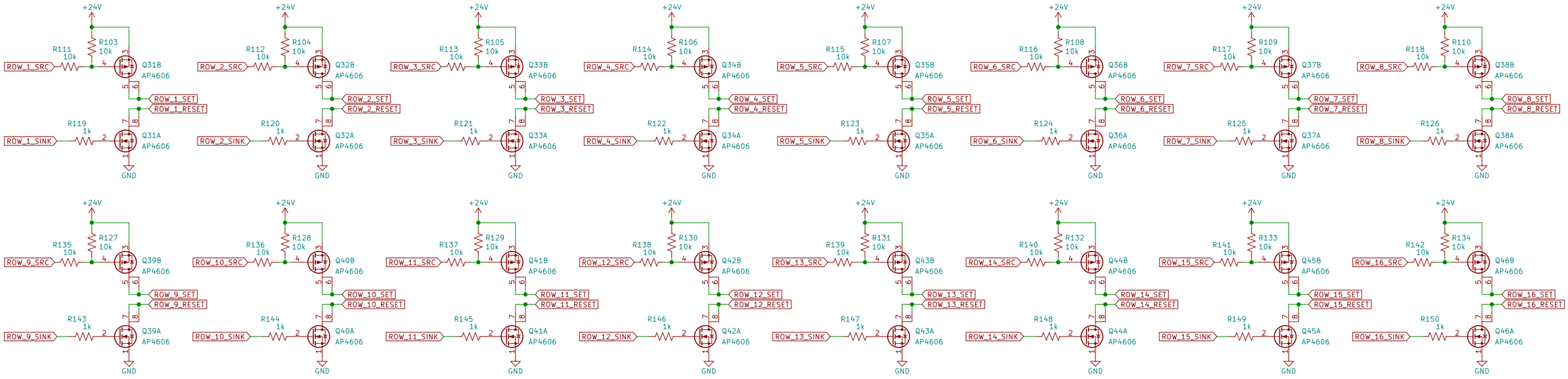
Size: USLedger	Date: 2023-03-21	Rev: E
KiCad E.D.A. kicad (6.0.0-0)		Id: 6/11



Sheet: /Column Drivers/
File: ColumnDriver.kicad_sch

Title: Luminator MAX3000 Custom Driver Board

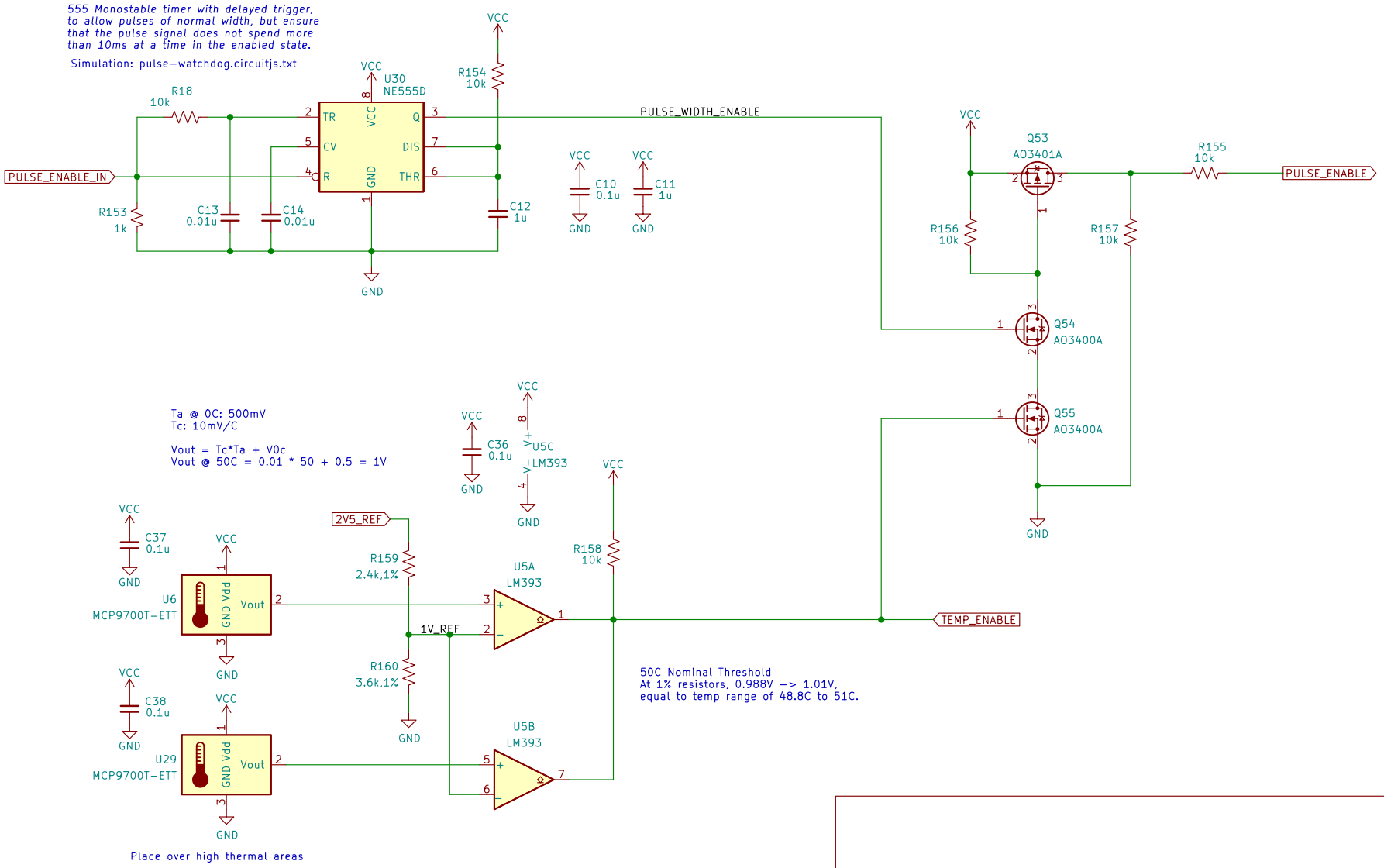
Size: USLedger	Date: 2023-03-21	**Rev: E**
KiCad E.D.A. kicad (6.0.0-0)		Id: 7/11



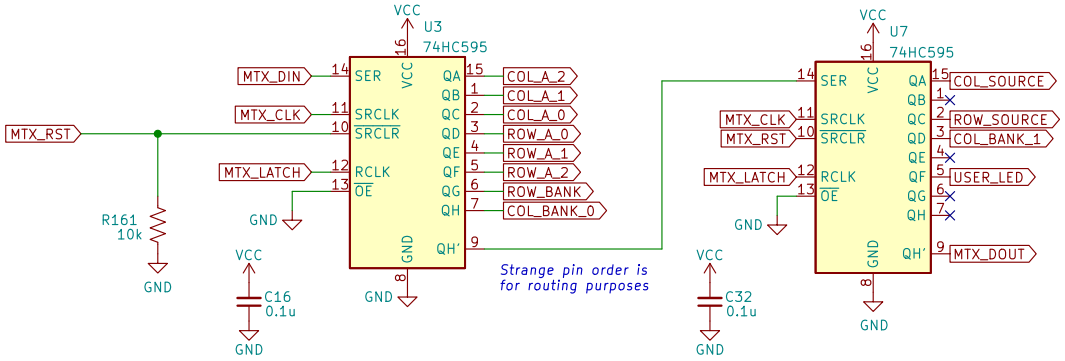
Sheet: /Row Drivers/
File: RowDriver.kicad_sch

Title: Luminator MAX3000 Custom Driver Board

Size: USLedger	Date: 2023-03-21	**Rev: E**
KiCad E.D.A. kicad (6.0.0-0)		Id: 8/11



Sheet: /Pulse Protection/		
File: PulseProtection.kicad_sch		
Title: Luminator MAX3000 Custom Driver Board		
Size: A4	Date: 2023-03-21	**Rev: E**
KiCad E.D.A. kicad (6.0.0-0)		Id: 9/11

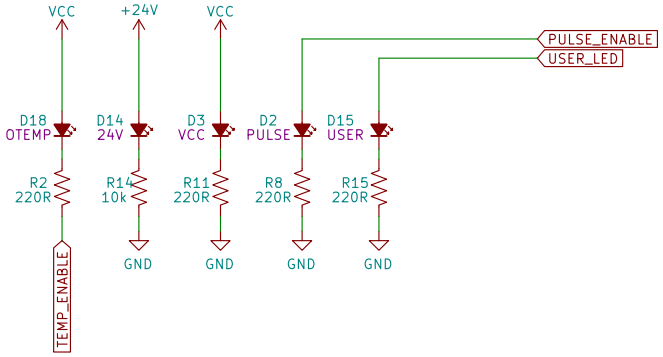


Sheet: /Shift Registers/
File: ShiftRegisters.kicad_sch

Title: Luminator MAX3000 Custom Driver Board

Size: A4	Date: 2023-03-21	**Rev: E**
KiCad E.D.A. kicad (6.0.0-0)		Id: 10/11

24V/Vcc – Yellow (Vf=2)
– 4.6mA for 24V at 4.7k
– 13.6mA for Vcc=5V, 5.9mA for Vcc=3.3V
PULSE – Green (Vf=3.3)
– 7.7mA for Vcc=5V, <1mA for Vcc=3.3V
USER – Blue (Vf=2.8)
– 10mA for Vcc=5V, 2.2mA for Vcc=3.3V



Sheet: /Indicator LEDs/
File: Indicators.kicad_sch

Title: Luminator MAX3000 Custom Driver Board

Size: A4	Date: 2023-03-21	**Rev: E**
KiCad E.D.A. kicad (6.0.0-0)		Id: 11/11