

SP6GK
 Microcontroller based vacuum tube tester
 SONATA – Switching Orientated Numerical Automated Tube Analyzer



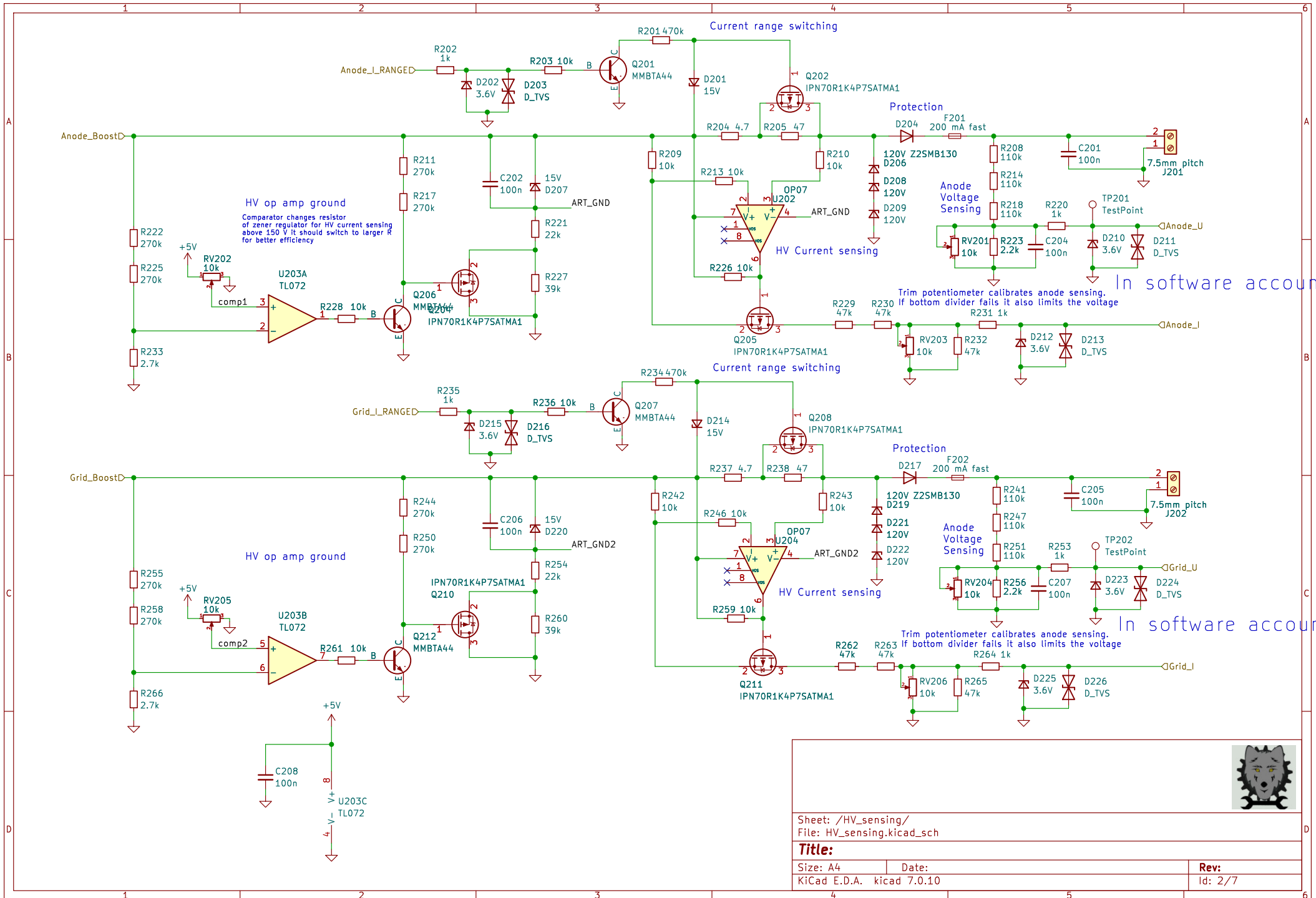
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Title: SONATA tube tester

Size: A4 Date: 2023-02-02
 KiCad E.D.A. kicad 7.0.10

Rev: 1.0
 Id: 1/7

Mosfet - problem with gate-source voltage
SSR - high on resistance



In software account for

In software account for

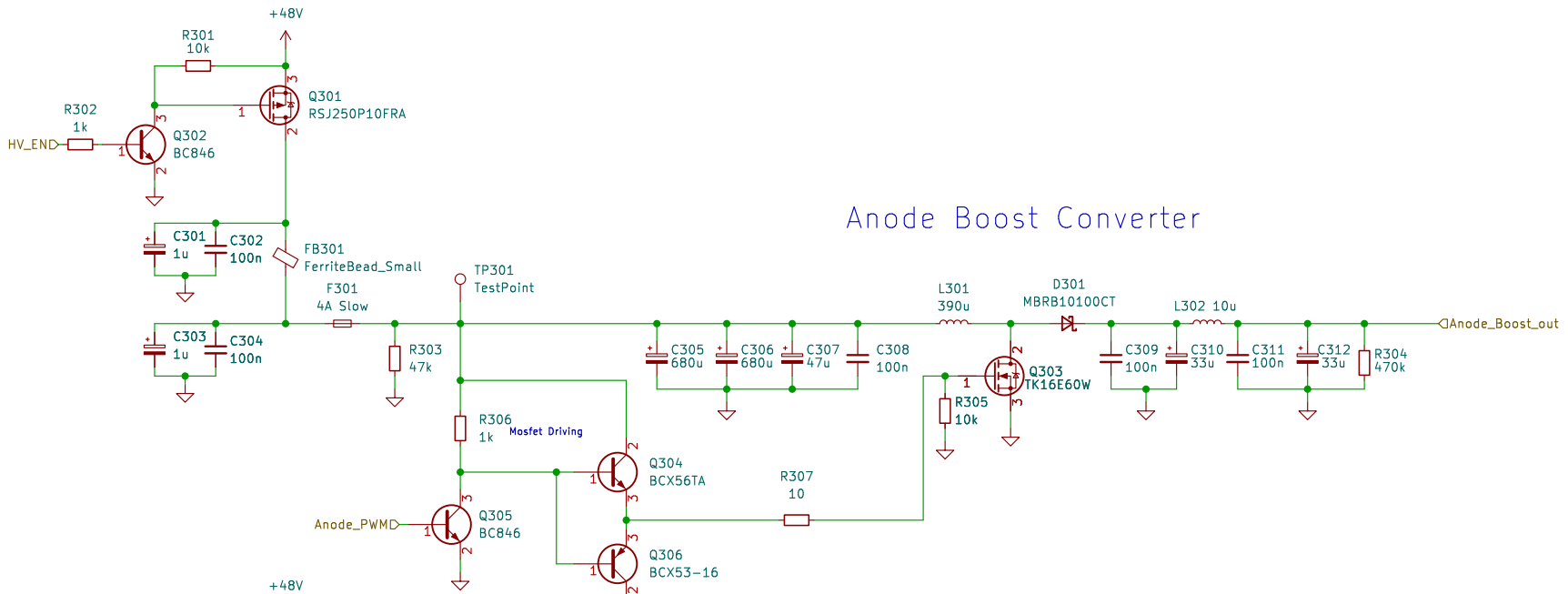


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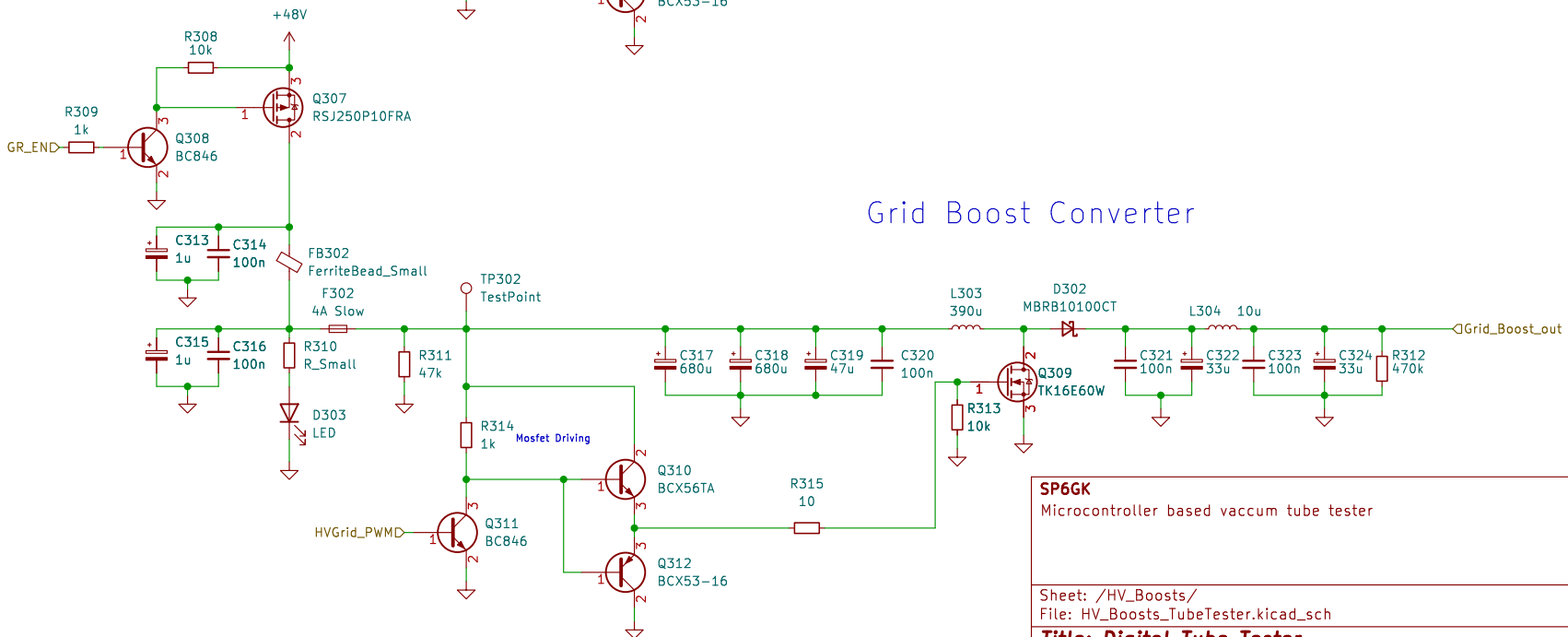
Title:

Size: A4 Date:
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Rev:
Id: 2/7



Anode Boost Converter



Grid Boost Converter

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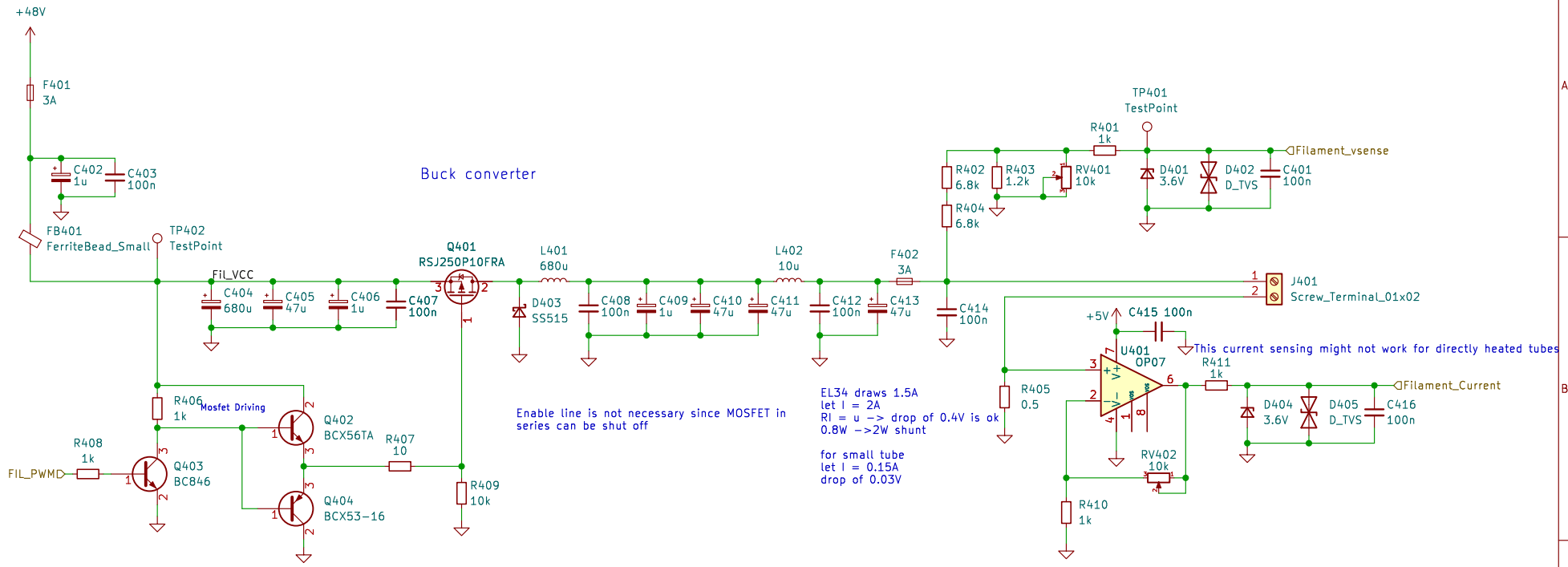


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Title: Digital Tube Tester

Size: A4 Date: 2023-02-02
KiCad E.D.A. kicad 7.0.10

Rev: 1.0
Id: 3/7



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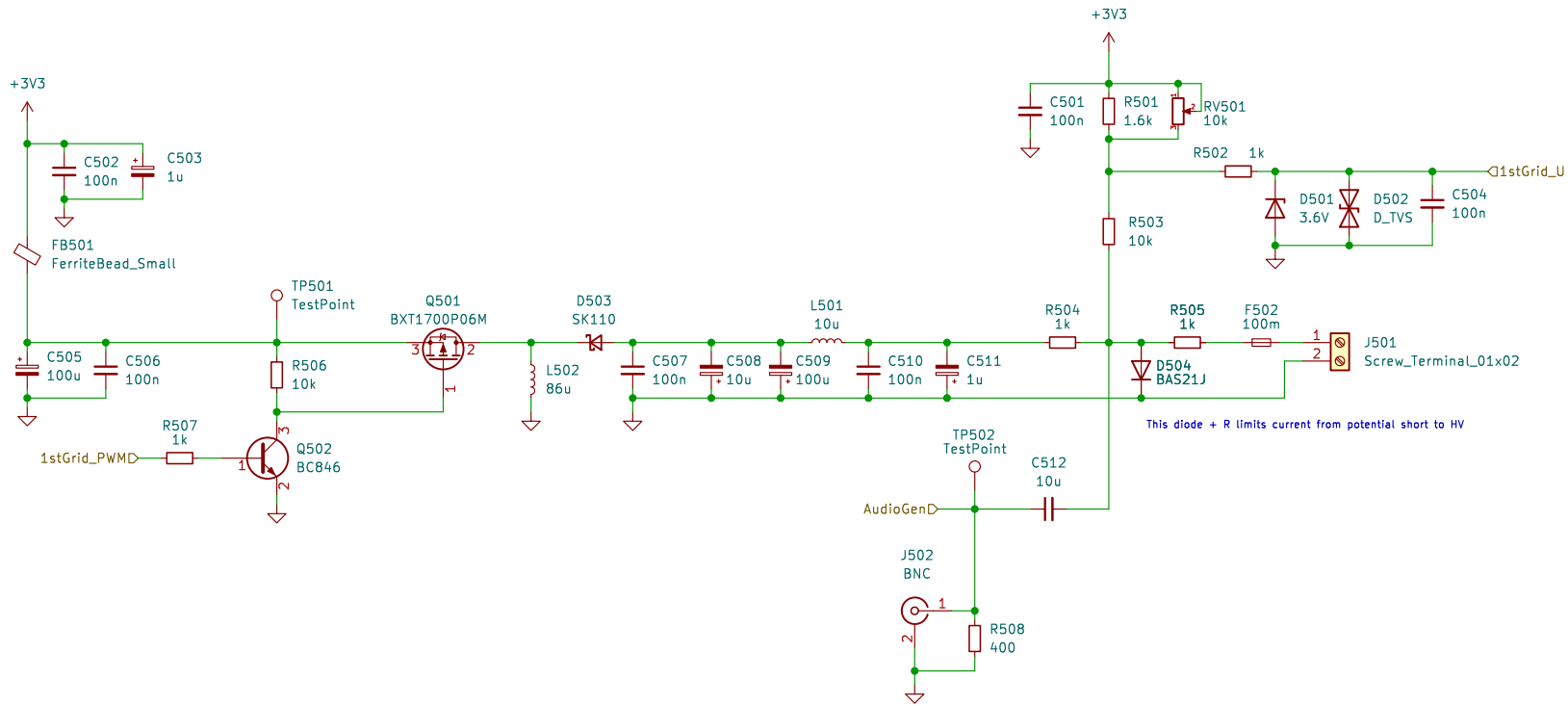
Microcontroller based vacuum tube tester



Sheet: /Filament_PSU/
File: FilamentPSU_TubeTester.kicad_sch

Title: Digital Tube Tester

Size: A4	Date: 2023-02-02	Rev: 1.0
KiCad E.D.A. kicad 7.0.10		Id: 3/7



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Sheet: /NegativeGrid_PSU/
File: NegativeGridPSU_TubeTester.kicad_sch

Title: Digital Tube Tester

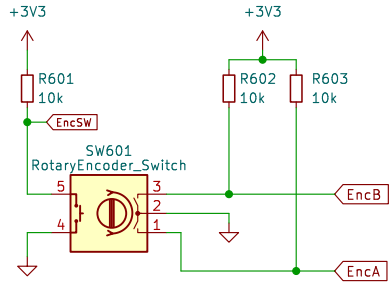
Size: A4 Date: 2023-02-02

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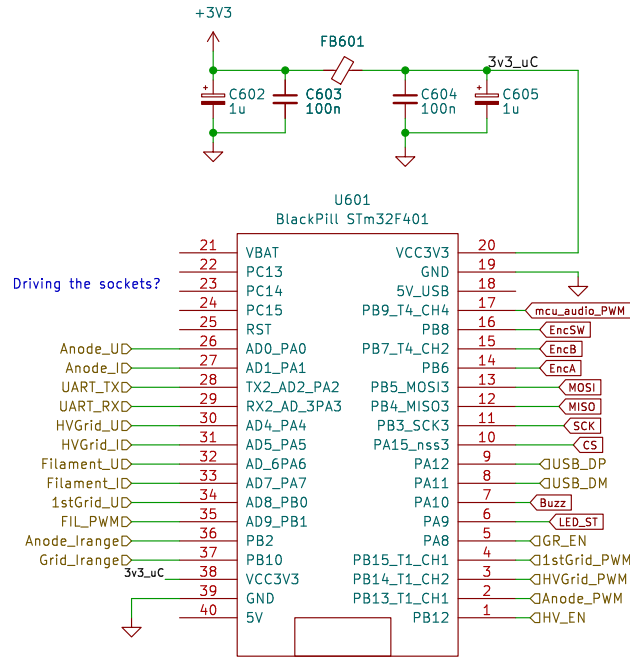
Rev: 1.0

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Controls

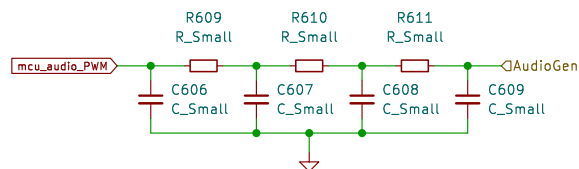


Microcontroller

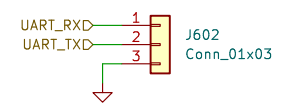
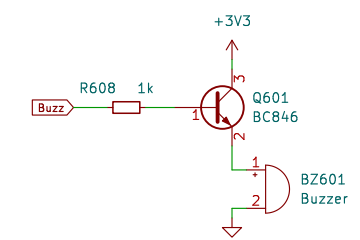
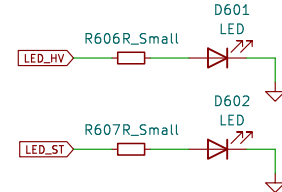
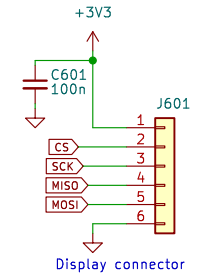


Driving the sockets?

Audio sine wave generation



Outputs



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Sheet: /Digital/
File: Digital_TubeTester.kicad_sch

Title: Digital Tube Tester

Size: A4 Date: 2023-02-02

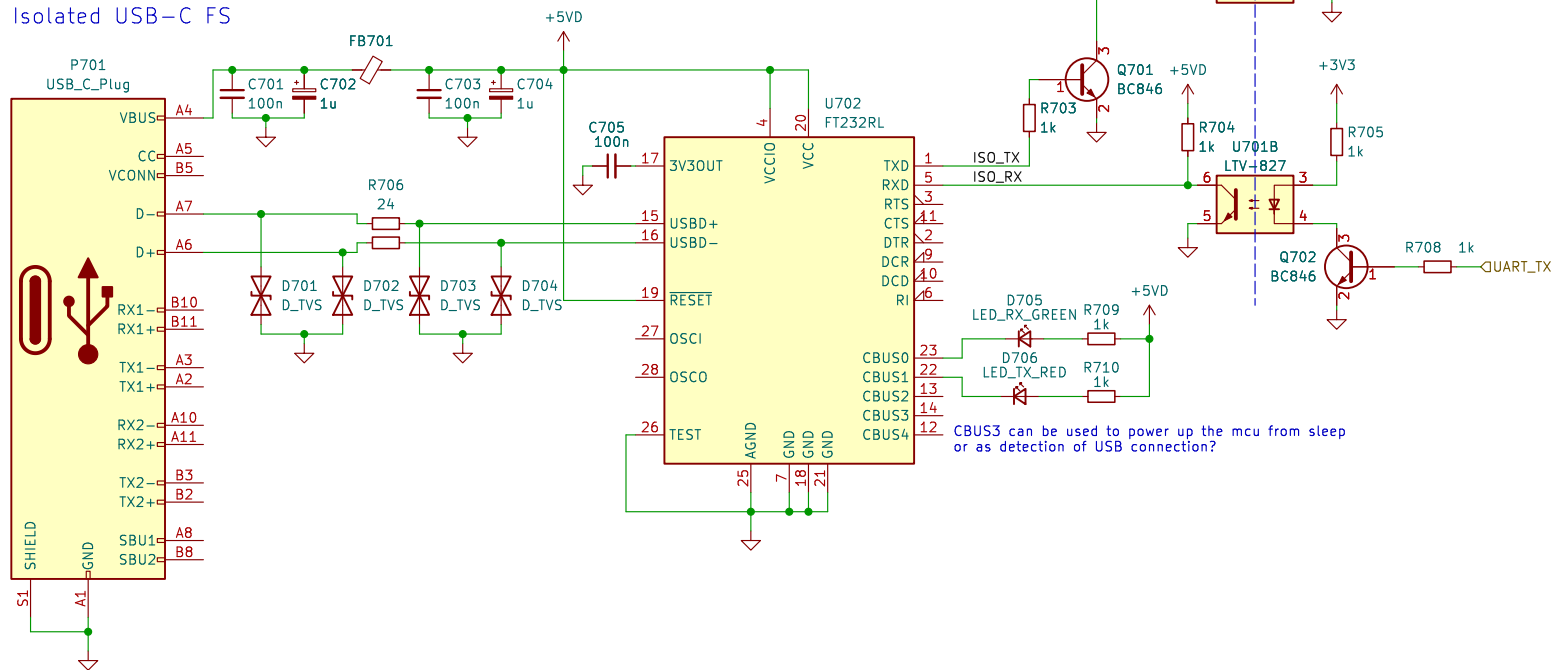
KiCad E.D.A. kicad 7.0.10

Rev: 1.0

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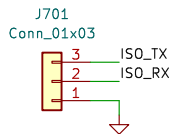
Isolated USB port

Isolated USB-C FS

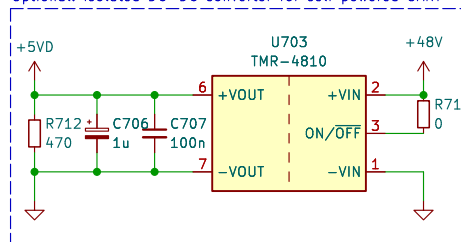


Works only with power on the USB cable

Isolated UART

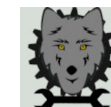


Optional: Isolated DC-DC converter for self powered UART



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Sheet: /USB_Port/
File: USB_PORT.kicad_sch

Title: Digital Tube Tester

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