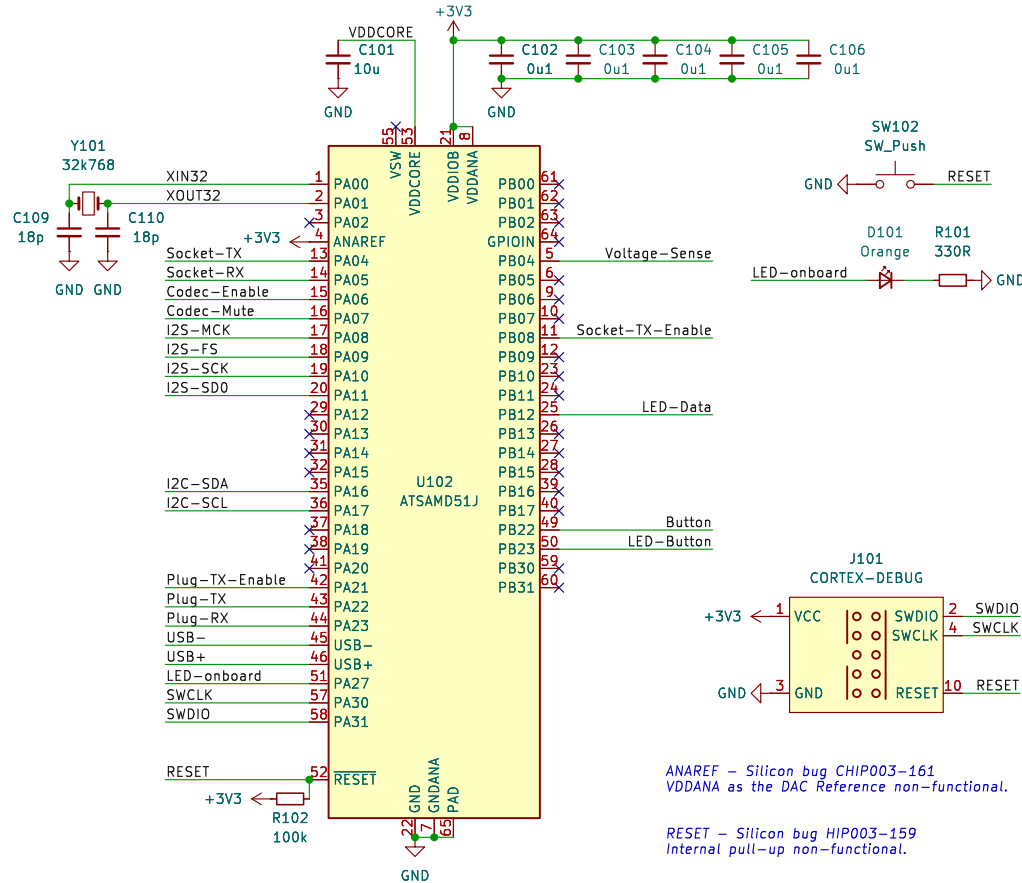
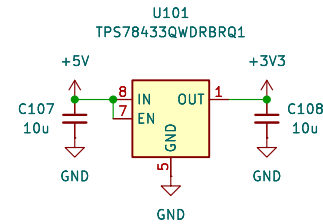


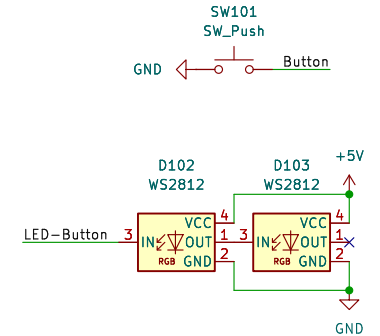
Microcontroller



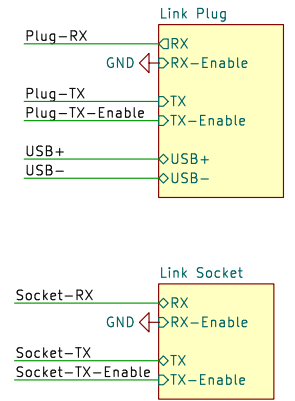
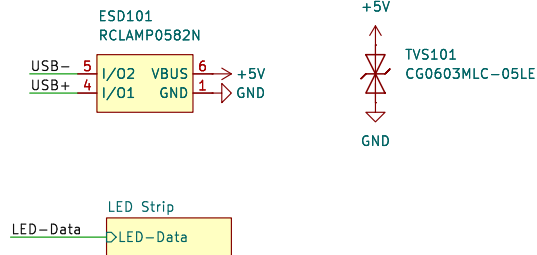
Power +3V3



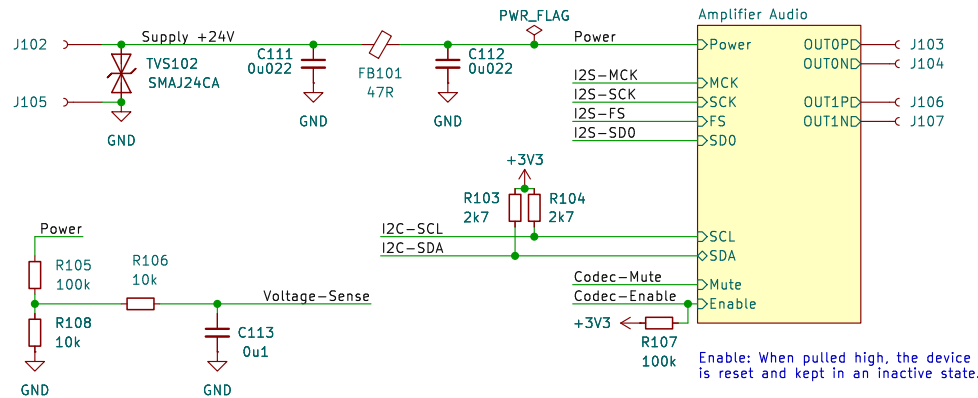
Button



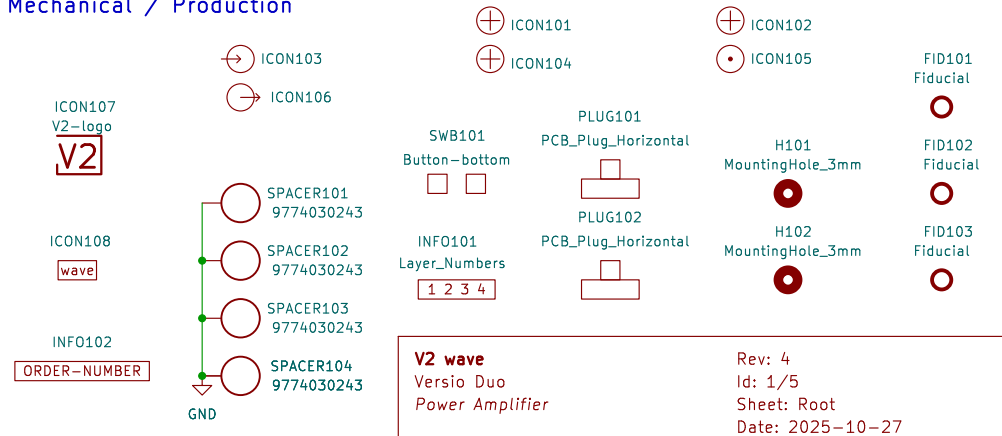
USB / V2 Link / LED Strip

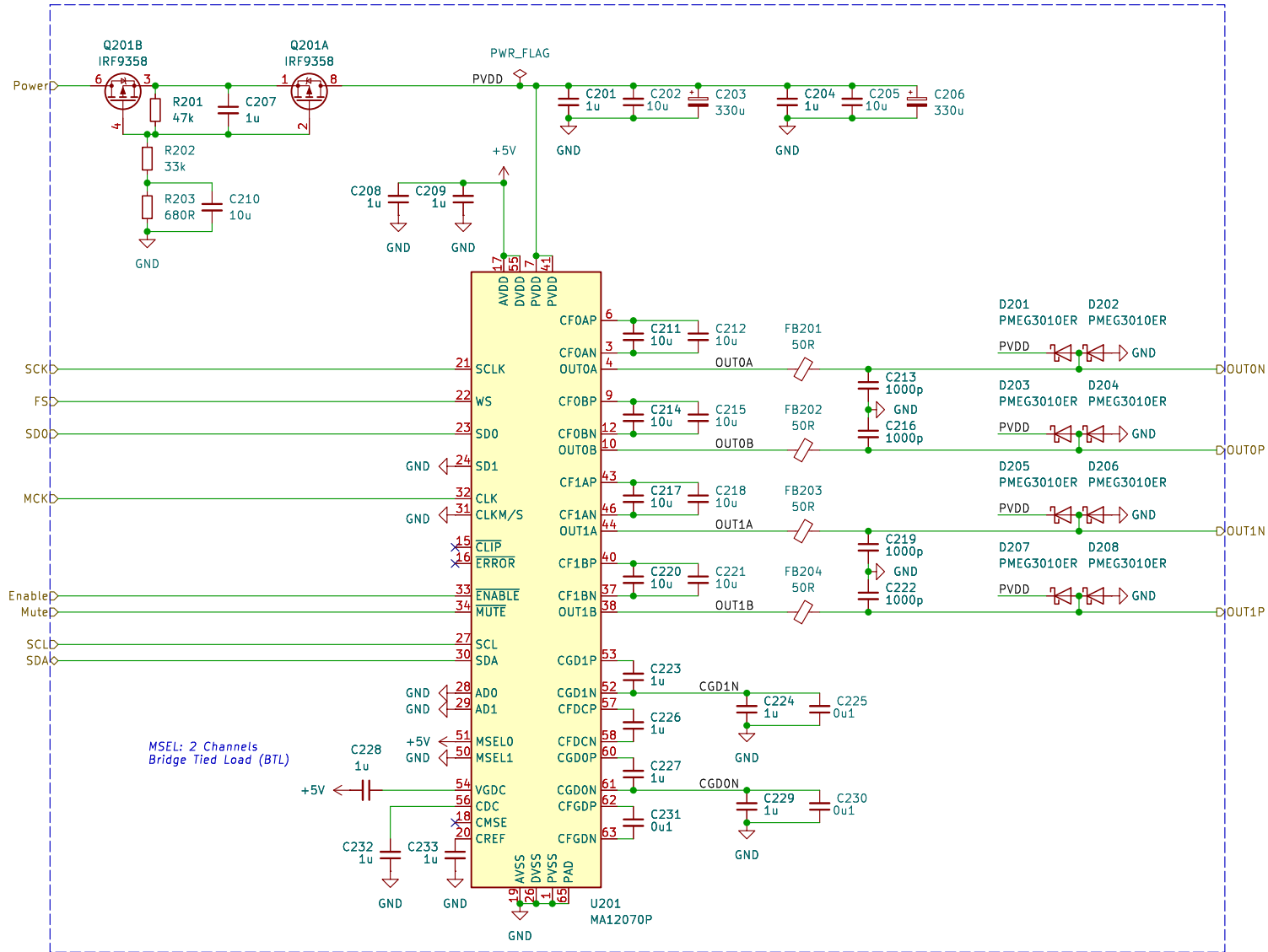


Class-D Amplifier



Mechanical / Production



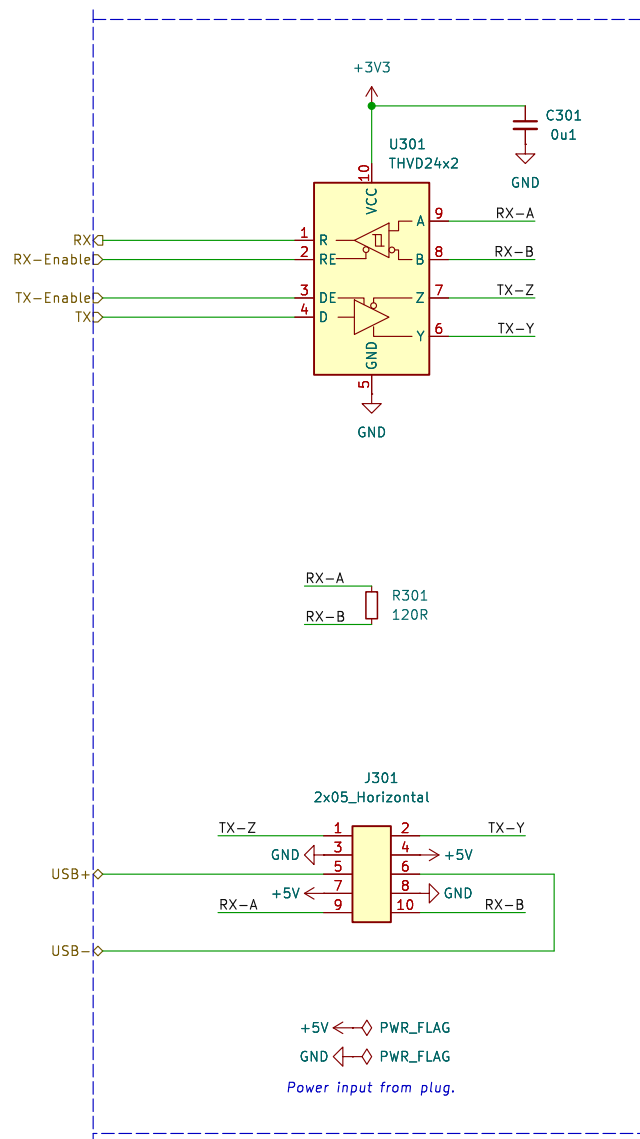


Errata: Power - External power supplies with some length of connecting wire are to be expected for this application. These wires effectively create a series of inductance with the amplifier board.

Combined with low-impedance decoupling of the supply line on the amplifier board, large peaks/ringing will occur when connecting the external power supply due to this L-C circuit.

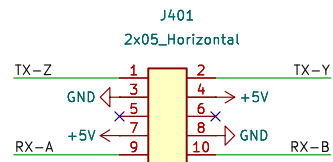
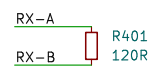
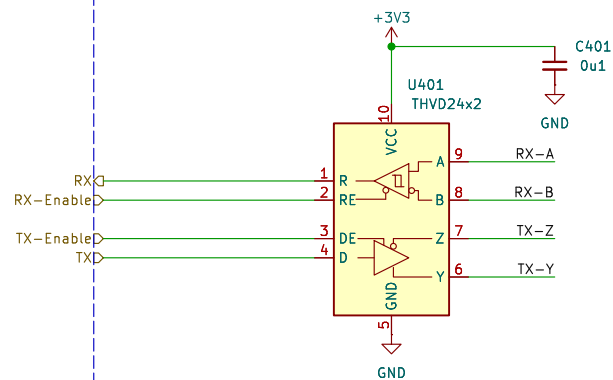
The large DV/dt and magnitude of these peaks can trigger the ESD protecting circuitry in the MA12070 device, leading to fatal destruction of the silicon. Slowing down the transition on-time of the MOSFETs makes the PVDD rise slowly and eliminates this problem. This is done by an R-C time constant on the VGS of the MOSFETs.

Errata: Diodes - It is known that large output in-rush current cannot be handled well by the substrate of the IC. This might result in device breakdown. Large in-rush currents can occur when for example a double / simultaneous short is created at the output in combination with long(> 1 m) speaker cables.



V2 Link
 Plug

Rev: 4
 Id: 3/5
 Sheet: Link Plug
 Date: 2025-10-27



V2 Link
Socket

Rev: 4
Id: 4/5
Sheet: Link Socket
Date: 2025-10-27

