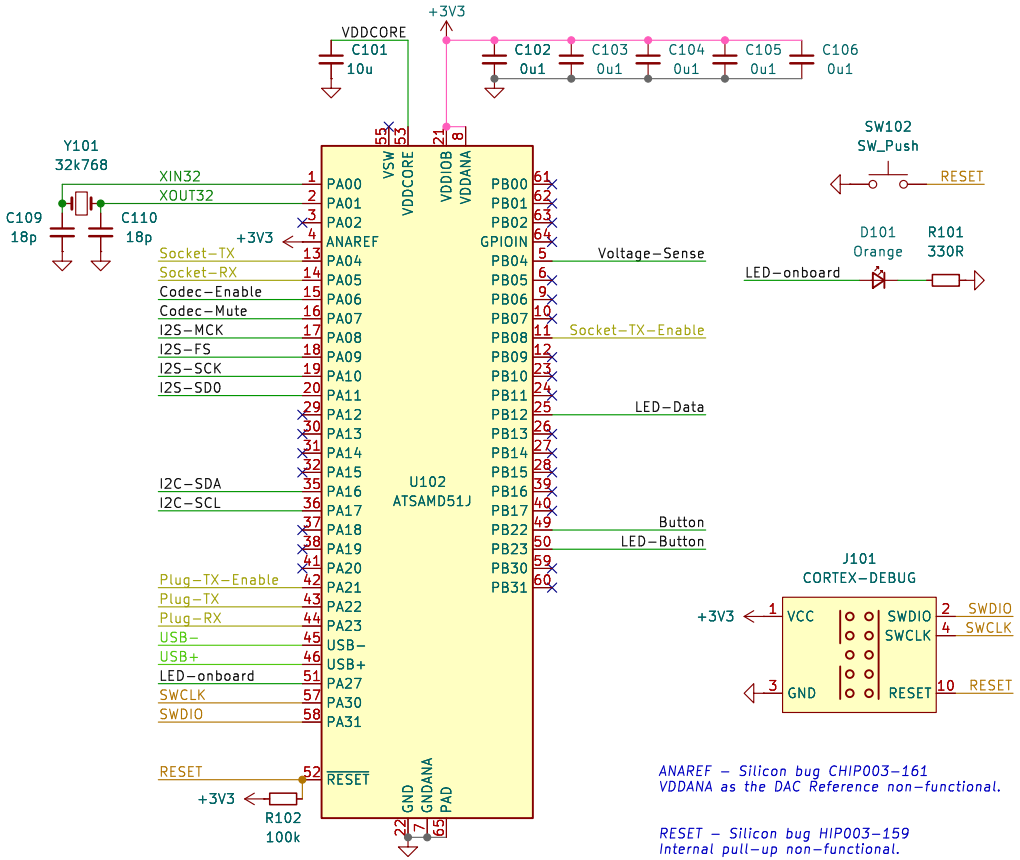
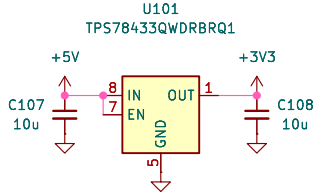
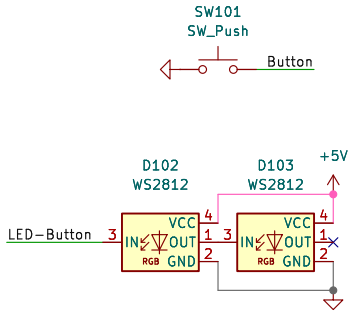
Microcontroller



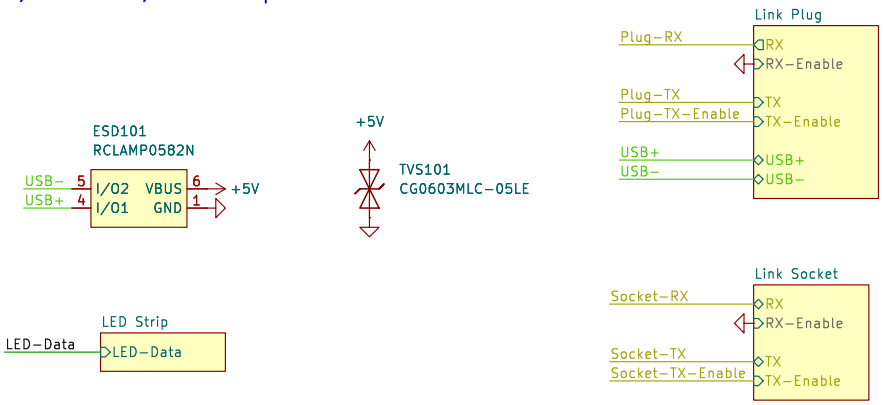
Power +3V3



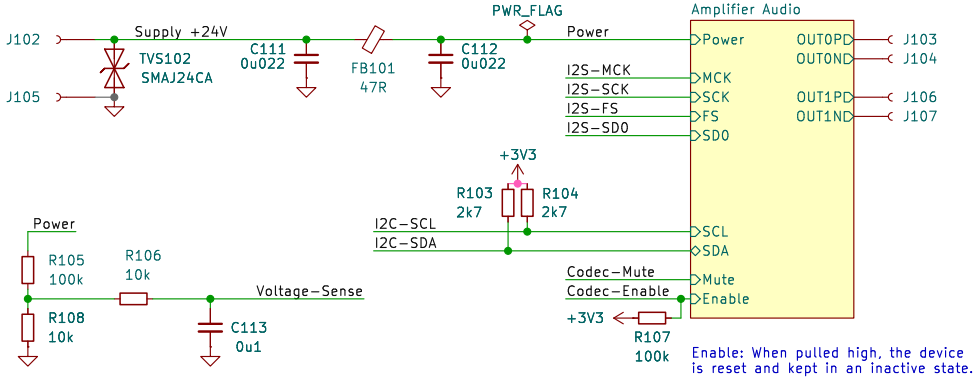
Button



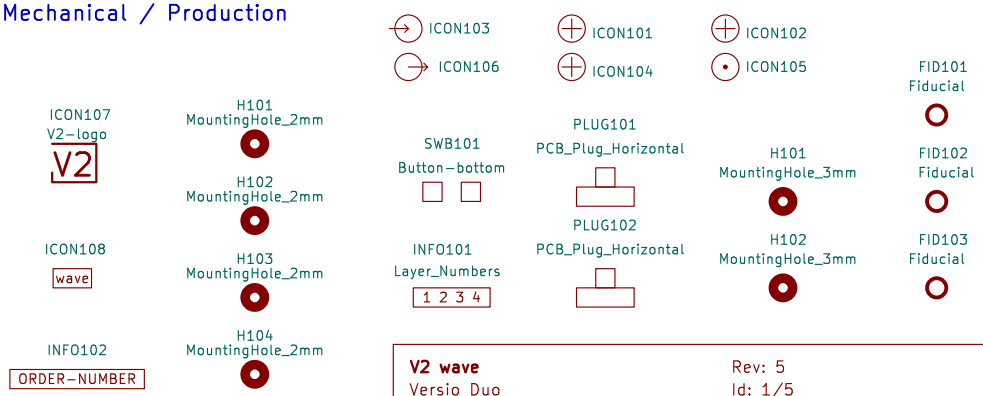
USB / V2 Link / LED Strip



Class−D Amplifier

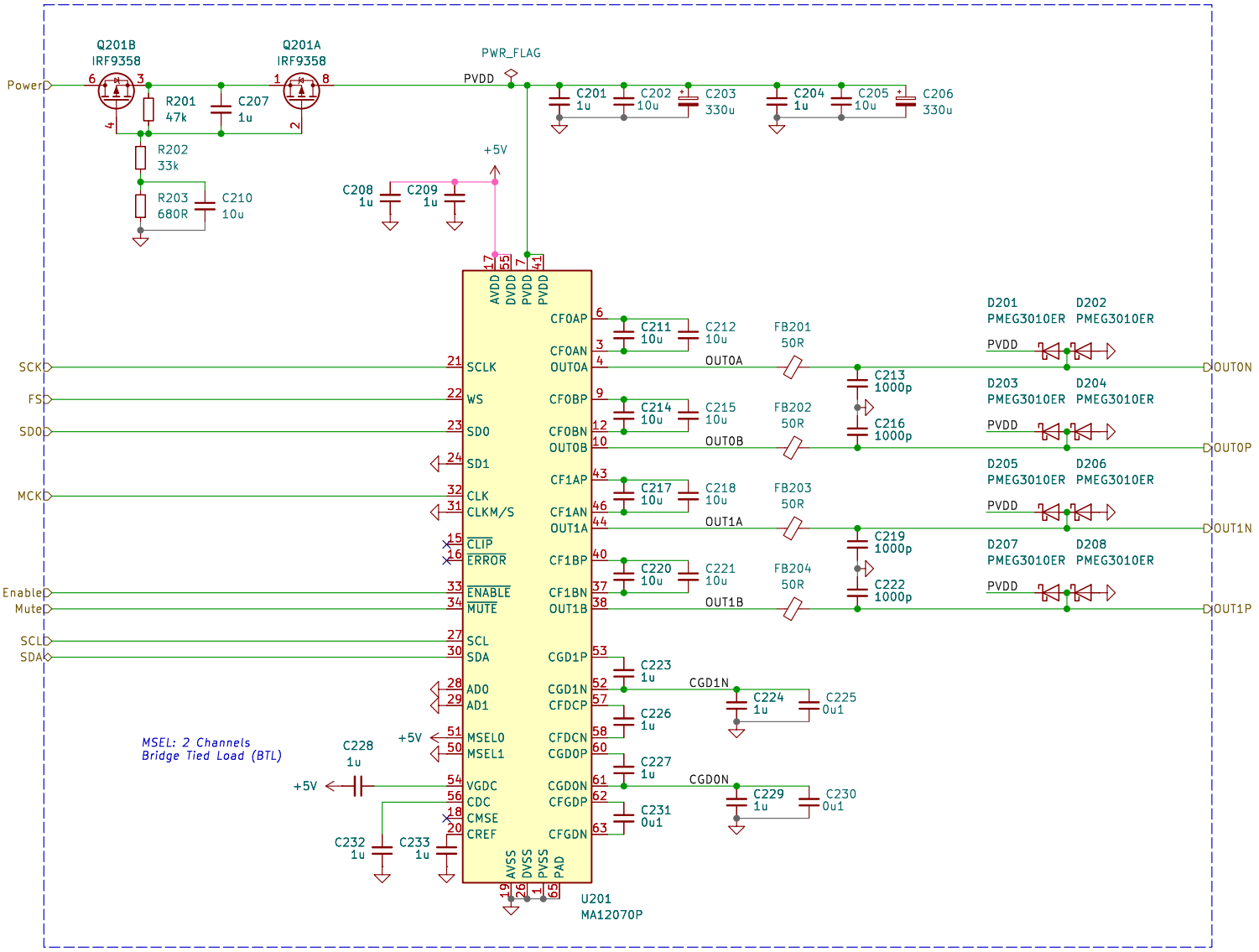


Mechanical / Production



V2 wave
Versio Duo
Power Amplifier

Rev: 5
Id: 1/5
Sheet: Root
Date: 2025−12−12



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.

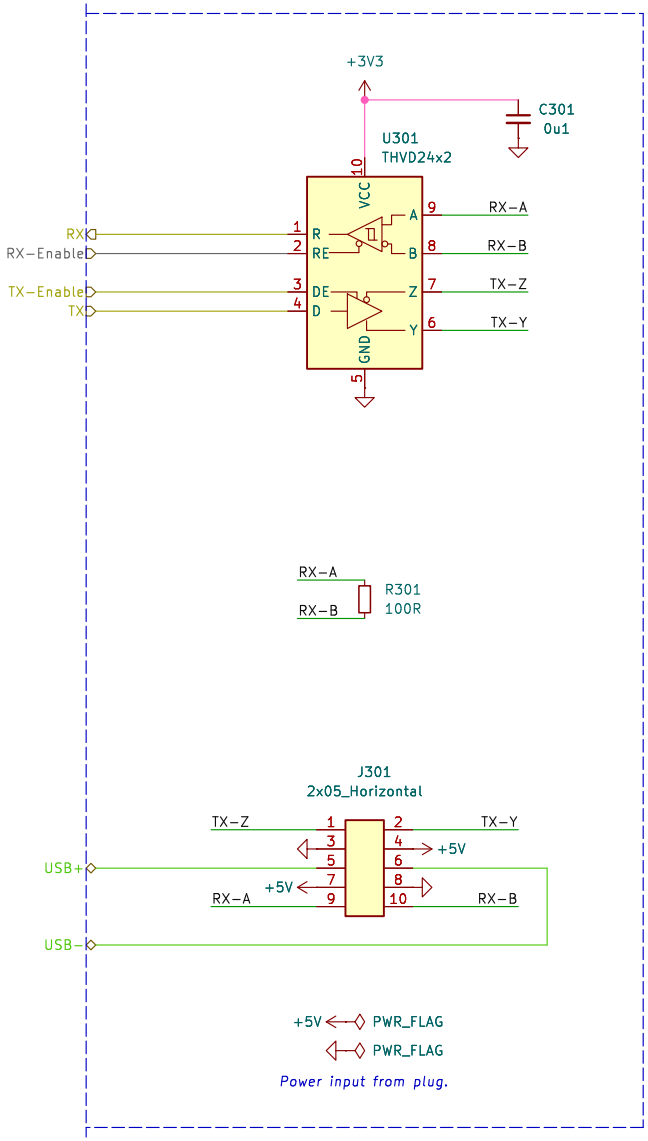
Combined with low-impedance decoupling of the supply line on the amplifier board, large peaks/ringing will occur when connecting the external power supply due to this L-C circuit.

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.

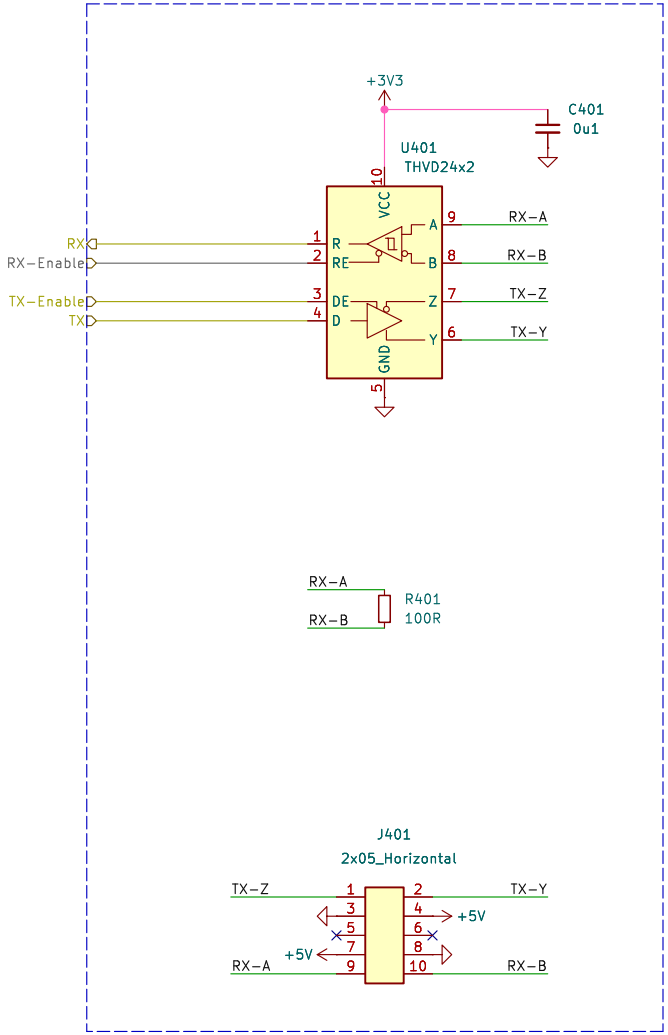
Amplifier Audio
Versio Duo

Rev: 2
Id: 2/5
Sheet: Amplifier Audio
Date: 2025-10-27



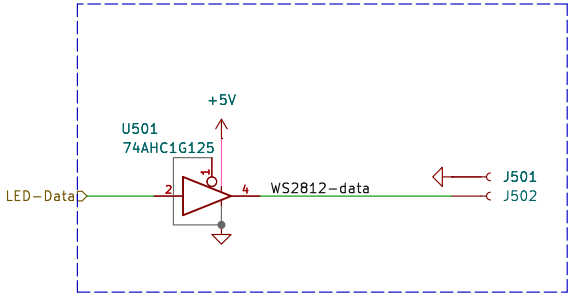
V2 Link
Plug

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



LED Strip	Rev:
Versio Duo	Id: 5/5
	Sheet: LED Strip
	Date: 2023-01-12