

TPA6120 Breakout

Wednesday, August 12, 2015 10:50 AM

This board is to provide a breakout for the TPA6120 in a non-inverting configuration. This board expects a single-ended input and also has a single-ended output to drive headphones. There are no component-specific footprints here so that users can use any input they want. A headphone jack can be wired directly to the board, or a gain-stage op amp board can be used to feed the TPA6120. There are also no footprints for through-hole capacitors on the board. Users will want to use various values to suit their needs. Caps can be soldered directly across the power supply terminals easily.

Parts List

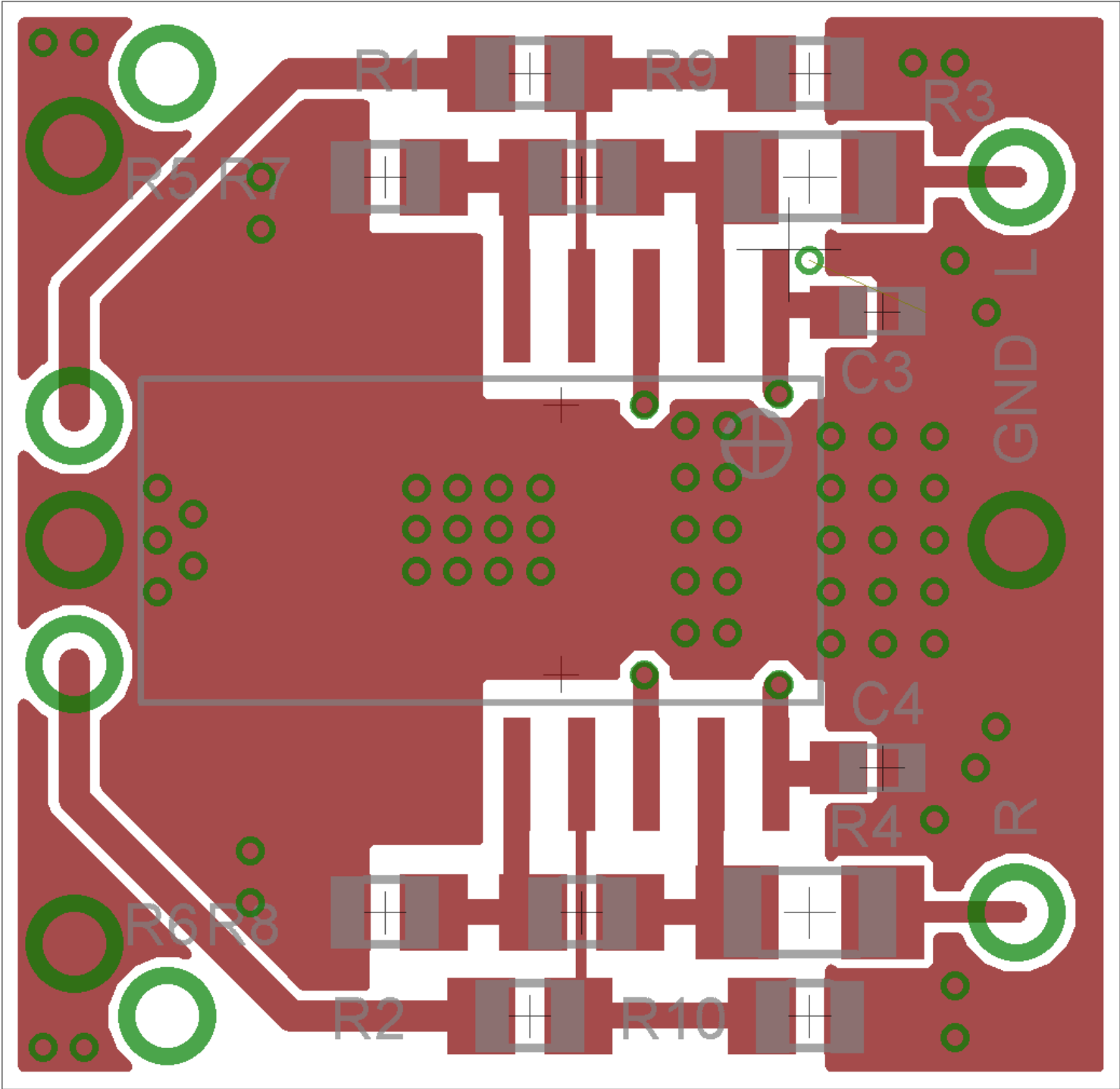
Part Name	Part Type	Part Value	Package
R3, R4	Resistor	Minimum 10 Ohm	1206
R1, R2, R5 - R10	Resistor	User Defined	0805
C1 - C4	Capacitor	100nF	0603
External Caps	Capacitor	User Defined	Through-Hole (See Note 1)
Headphone Jacks	PHONE JACK	N/A	Any single-ended dual channel phone jack
Power Supply	N/A	+/- 12V	Dual 9V or other PSU (See Note 2)

Note 1: These caps need to be soldered across the PSU input terminals. As mentioned above, there are no footprints for PSU input caps.

Note 2: Users can use dual 9V batteries to supply +/- 9V for this board. Users can also use other forms of power as long as a positive and negative voltage is supplied. My personal choice is the TPS7A4701 for the positive rail and the TPS7A3301 for the negative rail. These LDO regulators offer ultra-low noise suited for audio and instrumentation applications. For maximum performance, we recommend following the datasheet and the EVM example closely.

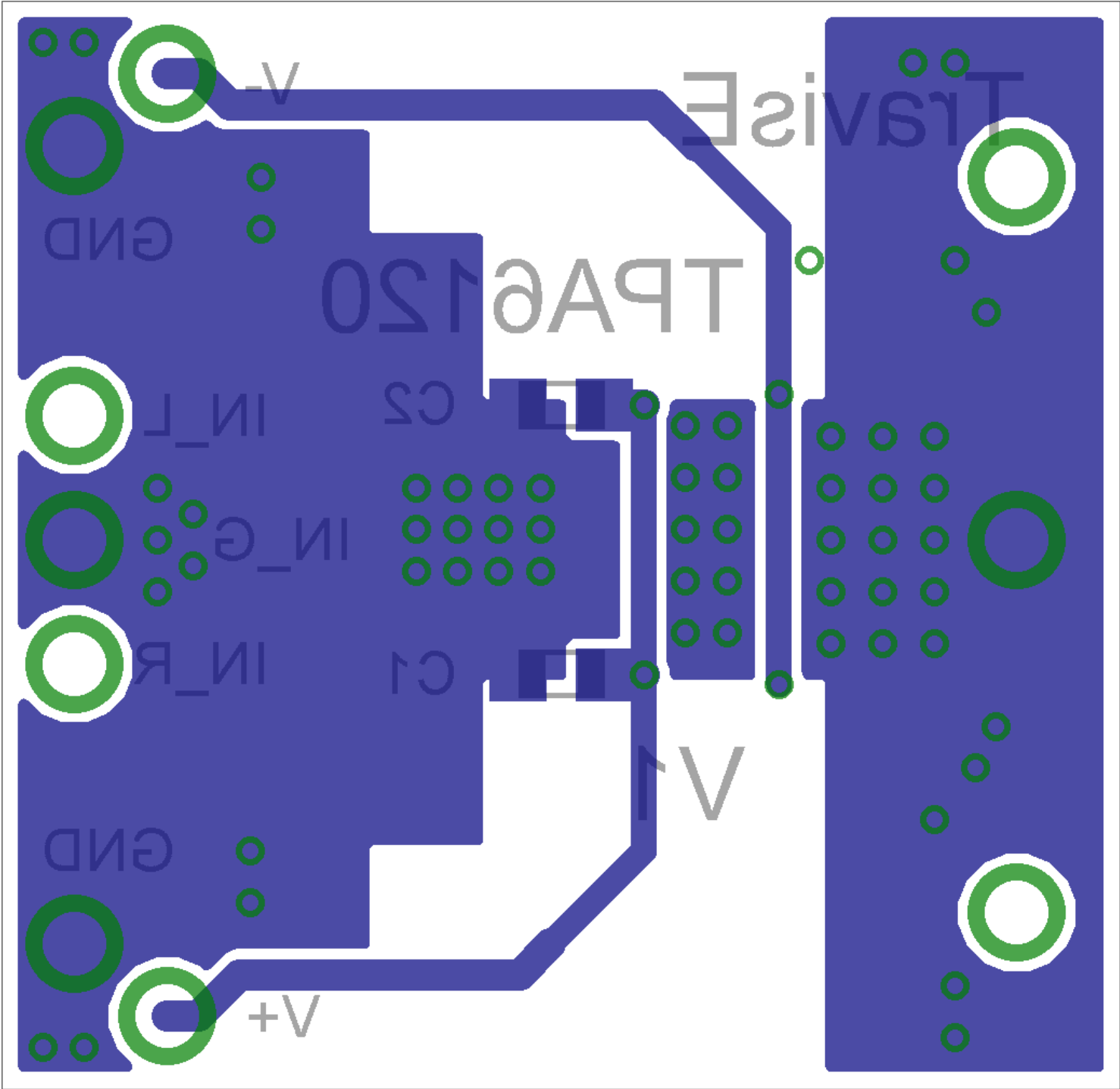
Top Layer

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Bottom Layer

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Top Assembly

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