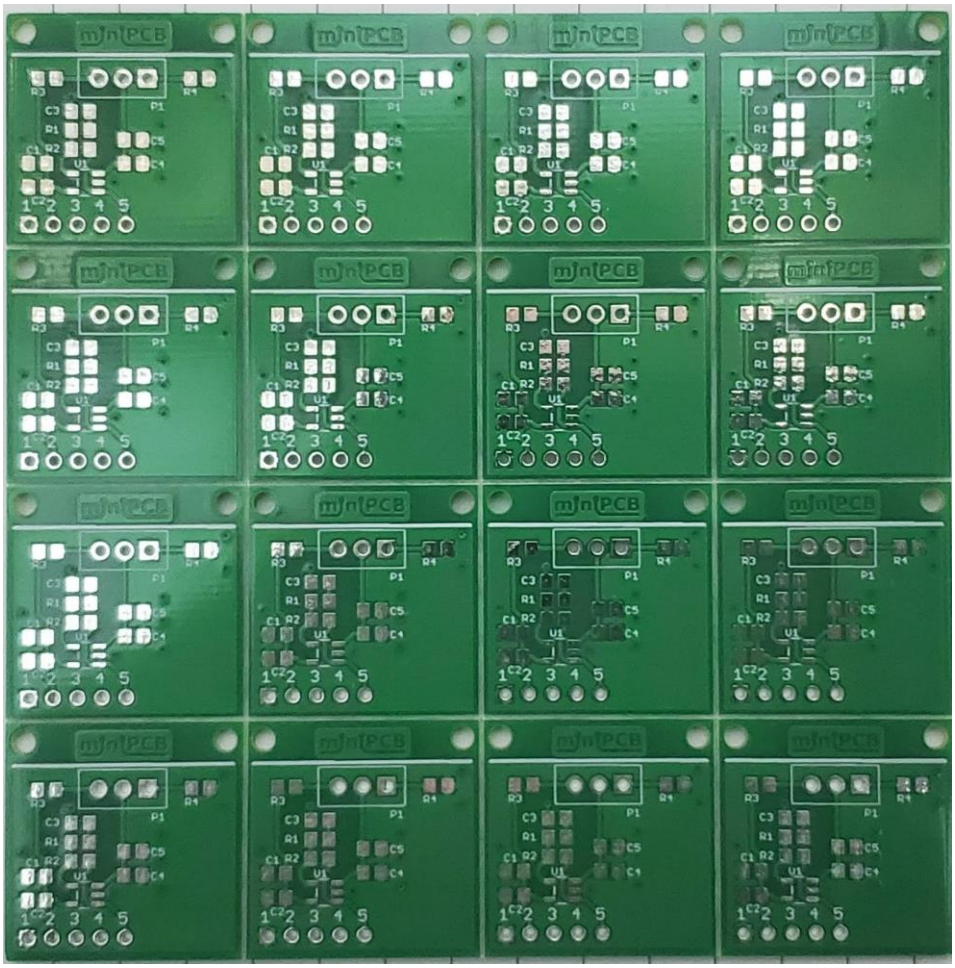
Inverting Amplifier

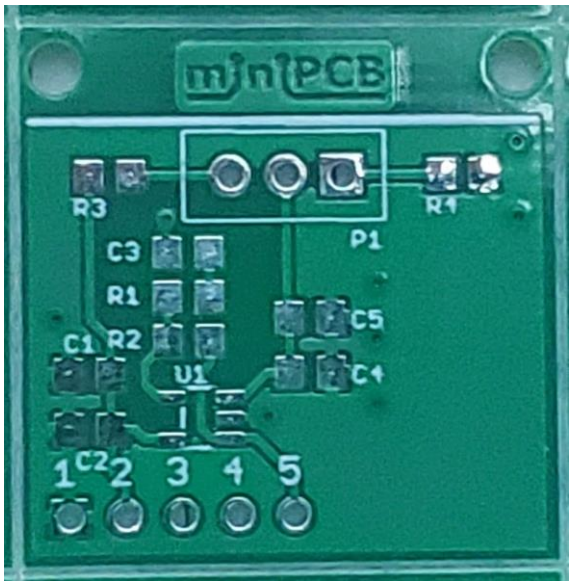
General Information

- **Group:** Opamp Amplifiers (04A)
- **Circuit:** Inverting Amplifier
- **Variant:** SMD, Single supply, DC bias trimpot, AC coupled input, DC coupled output
- **Pieces per Panel:** Sixteen (16)
- **Description:** High quality PCB panel with v-scores to easily separate the pieces.

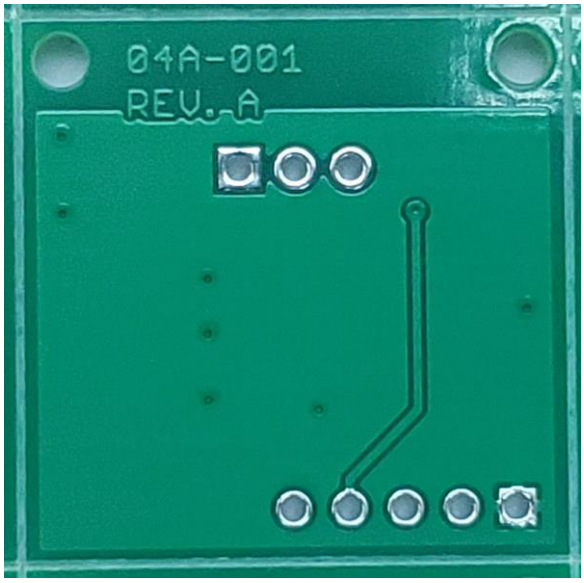
Panel



Single Board

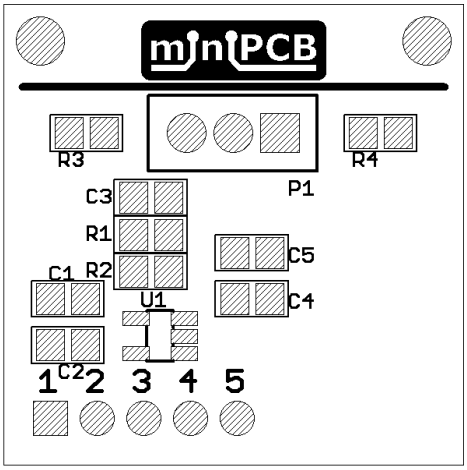


Top (Component) Side



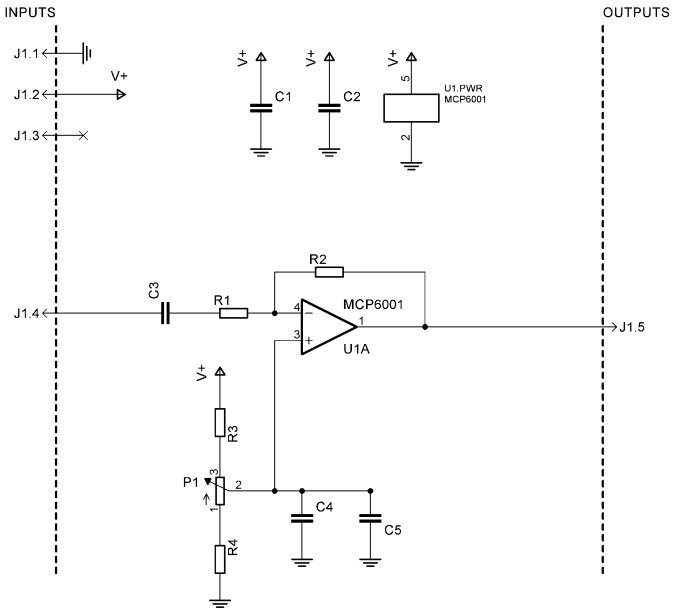
Bottom (Solder) Side

Part Locations



Schematic

REV.	REVISION NOTE	DATE
A	Initial Release	16OCT2021



THIS DRAWING AND THE INFORMATION IT CONTAINS IS PROVIDED FOR EDUCATIONAL USE ONLY.

Circuit Variant: SMD, SINGLE SUPPLY, DC BIAS TRIMPOT		
Circuit Name: INVERTING AMPLIFIER		
Part Number: 04A-001	Part Category: OPAMP AMPLIFIERS	
REV.	A	Author: Nolan Manteufel
SHEET	1/1	Revision Date: 10/16/2021 5:28:42 PM

Student Name:	Date:
Class:	Assignment:

Part List

#	Name	Type	Footprint	Values	Notes
1	R1	Resistor	0805		
2	R2	Resistor	0805		
3	R3	Resistor	0805		
4	R4	Resistor	0805		
5	C1	Capacitor	0805		
6	C2	Capacitor	0805		
7	C3	Capacitor	0805		
8	C4	Capacitor	0805		
9	C5	Capacitor	0805		
10	U1	Opamp	SOT-23-5		Pinout compatible with MCP6001.
11	P1	Trimpot	0.1” pitch		
12	J1	Header Pins	5-pin	N/A	0.1” pitch (distance between pins)

Performance Characteristics

Parameter	Units	Target	Measured	Notes
Supply Voltage	VDC			
Quiescent Current	mA			
Input Impedance	Ohms			Measure near the center of the frequency pass band.
Output Impedance	Ohms			
Low Freq. -3dB	Hz			
High Freq. -3dB	Hz			
Voltage Gain, A_v	$V_{out} \div V_{in}$			Measure near the center of the frequency pass band.
Current Gain, A_i	$I_{out} \div I_{in}$			
Power Gain, A_p	$A_v \times A_i$			

Supporting Documents

#	Doc. No.	Document Type	Document Title
1	DN.001	Design Notes	Selecting Parts for Your miniPCB

Revision History

Revision	Note	Date
A	Initial Release	DDMMMYYYY

Document Control

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Document No.	04A-001
Revision	DRAFT
File Location	C:\datasheets
User ID	nolan
Computer ID	desktop-jti13j1
Datetime	20211116235912