REV	DESCRIPTION	ECO	DATE
A1	INITIAL RELEASE		

NOTES:
1. DIMENSIONS ARE IN MILLIMETERS.

2. MANUFACTURING SPECIFICATIONS:
ADDITIONAL OPTIONS AVAILABLE UPON REQUEST.

2.1 BASE MATERIAL: FR4-TG130

2.2 LAYERS: TWO (2)

2.3 COPPER WEIGHT:
DEFAULT:
- ONE OUNCE (1 oz)

AVAILABLE UPON REQUEST:
- TWO OUNCE (2 oz)

2.4 PIECES PER PANEL: FOUR (4)

2.5 PCB THICKNESS:
DEFAULT:
- 1.60 MM

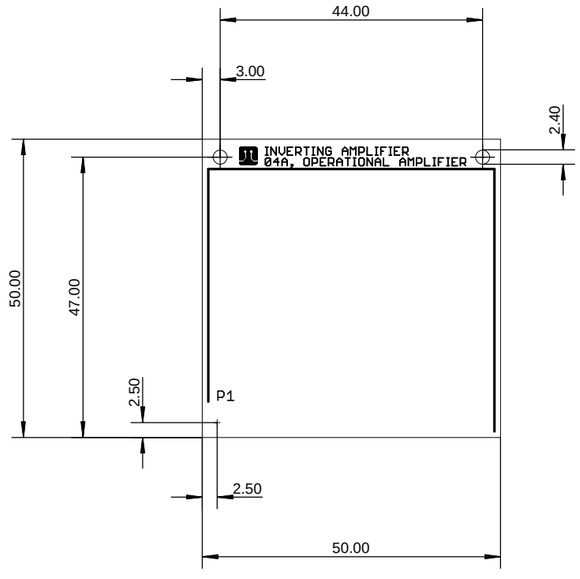
AVAILABLE UPON REQUEST:
- 0.6 MM
- 0.8 MM
- 1.0 MM
- 1.2 MM
- 2.0 MM

2.6 PCB COLOR:
DEFAULT:
- GREEN

AVAILABLE UPON REQUEST:
- RED
- YELLOW
- BLUE
- WHITE
- BLACK
- MATTE BLACK

2.7 SURFACE FINISH:
DEFAULT:
- HOT AIR SOLDER LEVELED (HASL)

AVAILABLE UPON REQUEST:
- LEAD FREE HOT AIR SOLDER LEVELED (HASL LEAD FREE)
- ELECTROLESS NICKEL IMMERSION GOLD (ENIG)
- ORGANIC SOLDERABILITY PRESERVATIVES (OSP)



FIND	REF DES	DESCRIPTION	FOOTPRINT	VALUE
21	TP*	TEST POINT, KE-5000 SERIES	KE-5001	
20	U1	OPAMP, DUAL	DIP8	
19	R9	RESISTOR	1/4 W	
18	R8	TRIMMER, MULTITURN	0.1" PITCH	
17	R7	RESISTOR	1/4 W	
16	R6	RESISTOR	1/4 W	
15	R5	RESISTOR	1/4 W	
14	R4	RESISTOR	1/4 W	
13	R3	RESISTOR	1/4 W	
12	R2	TRIMMER, MULTITURN	0.1" PITCH	
11	R1	RESISTOR	1/4 W	
10	P1	HEADER PINS, RA, 5P	0.1" PITCH	
9	J1	HEADER PINS, VERT, 2P	0.1" PITCH	
8	C7	CAPACITOR	5MM PITCH	
7	C6	CAPACITOR	5MM PITCH	
6	C5	CAPACITOR	5MM PIT., 10MM DIA.	
5	C4	CAPACITOR	5MM PITCH	
4	C3	CAPACITOR	5MM PITCH	
3	C2	CAPACITOR	5MM PITCH	
2	C1	CAPACITOR	5MM PIT., 10MM DIA.	
1	—	PCB, BARE BOARD	N/A	04A-005

DATETIME STAMP: not saved!

DR N. MANTEUFEL DATE

ENG DATE

QA DATE

mjnPCB

TITLE
INVERTING AMPLIFIER

PRINTED CIRCUIT BOARD
AMPLIFIERS, OPAMPS
INVERTING AMPLIFIER
SINGLE SUPPLY, DC BIAS JUMPER, THD

SIZE	DWG NO	REV
B	04A-005	A1

SCALE NONE SHEET 1/2

NOTES:
3. PERFORMANCE FUNCTIONS:
3.1 GAIN CONTROL:
- ADJUSTING RESISTOR R8 CONTROLS OUTPUT GAIN.

3.2 DC BIAS CONTROL:
- ADJUSTING RESISTOR R2 CONTROLS DC BIAS VOLTAGE.

3.3 JUMPER SELECTION:
- WITH: DC BIAS AMPLIFIED.
- WITHOUT: DC BIAS BLOCKED, ONLY AC AMPLIFIED.

4. CALIBRATION ADJUSTMENT PROCEDURE:

4.1 PURPOSE
- SET OUTPUT DC BIAS TO HALF OF SUPPLY VOLTAGE.

4.2 SCOPE
- PERFORM DURING CALIBRATION PROCEDURE.

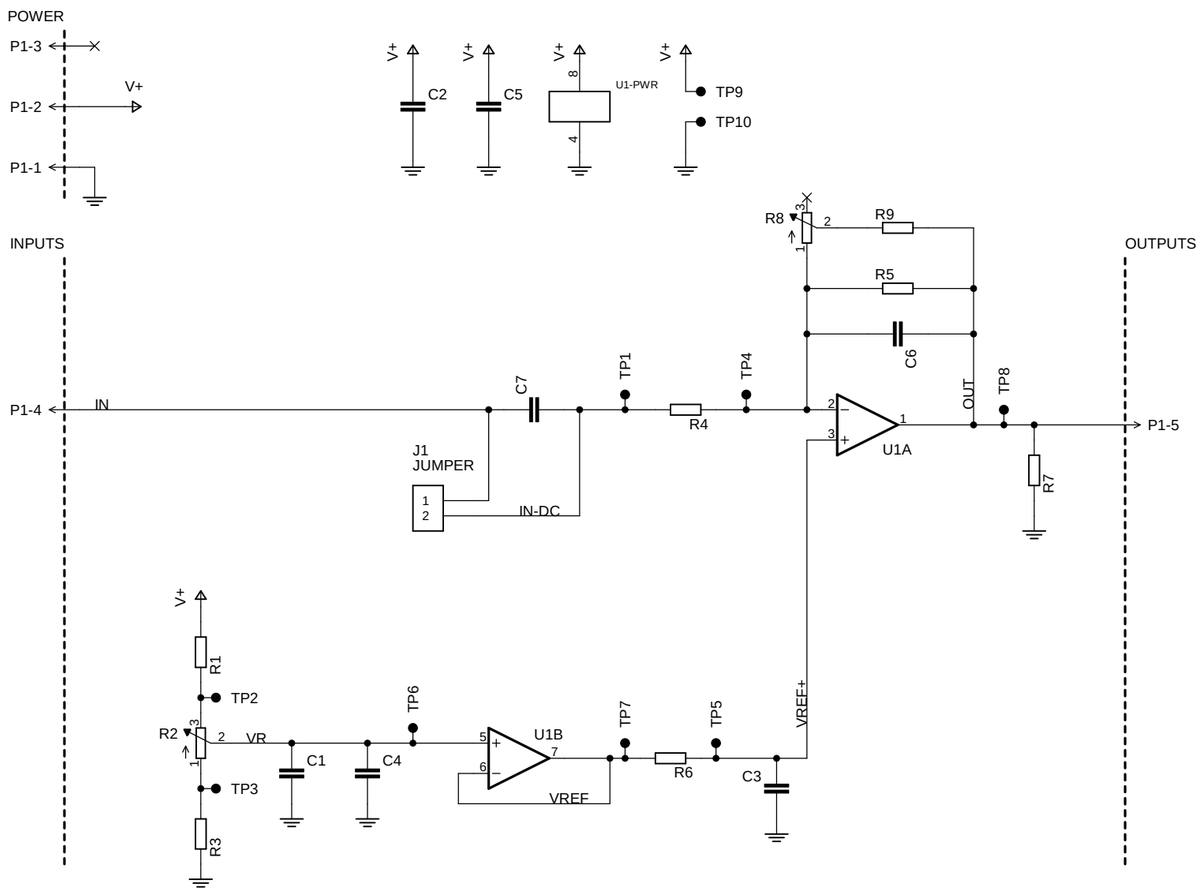
4.3 PROCEDURAL NOTES
- PERFORM AFTER SAFE TO TURN ON (STTO) TEST PASSES.

4.4 PROCEDURE
4.4.1 APPLY POWER:
- SUPPLY VOLTAGE DETERMINES TARGET ADJUSTMENT.

4.4.2 APPLY STIMULI:
- ALLOW PIN P1-4 TO FLOAT.

4.4.3 MEASURE RESPONSE:
- MEASURE OUTPUT VOLTAGE DC BIAS.

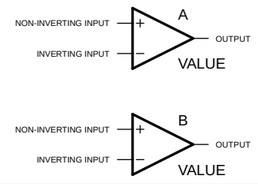
4.4.4 ADJUST R2 TRIMMER POTENTIOMETER:
- PASS WHEN MEASUREMENT EQUALS HALF SUPPLY VOLTAGE.



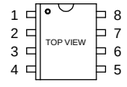
DUAL OPAMP

FOOTPRINT: DIP8

SCHEMATIC SYMBOL:



PINOUT:



PIN	DESCRIPTION
1	OUTPUT, A
2	INVERTING INPUT, A
3	NON-INVERTING INPUT, A
4	-V SUPPLY
5	NON-INVERTING INPUT, B
6	INVERTING INPUT, B
7	OUTPUT, B
8	+V SUPPLY

mJnLPCB

TITLE
INVERTING AMPLIFIER CIRCUIT

SIZE	DWG NO	REV
B	04A-005	A1
SCALE NONE	SHEET 2/2	