Headphone Amplifiers

BD88400FJ Evaluation Board Information

BD88400FJ-EVK-001

●General

BD88400FJ is an output coupling capacitorless headphone amplifier. This IC has a built-in regulated negative voltage generator type that generates the direct regulated negative voltage from the supply voltage. It is possible to drive headphones in a ground standard with both voltage of the positive voltage (+2.4V) and the negative voltage (-2.4V). Therefore a large capacitance output coupling capacitor becomes needless and can reduce cost, board area and height of the part.

In addition, there is no signal degradation at the low range caused by the output coupling capacitor and output load impedance, thus a rich low tone can be outputted.

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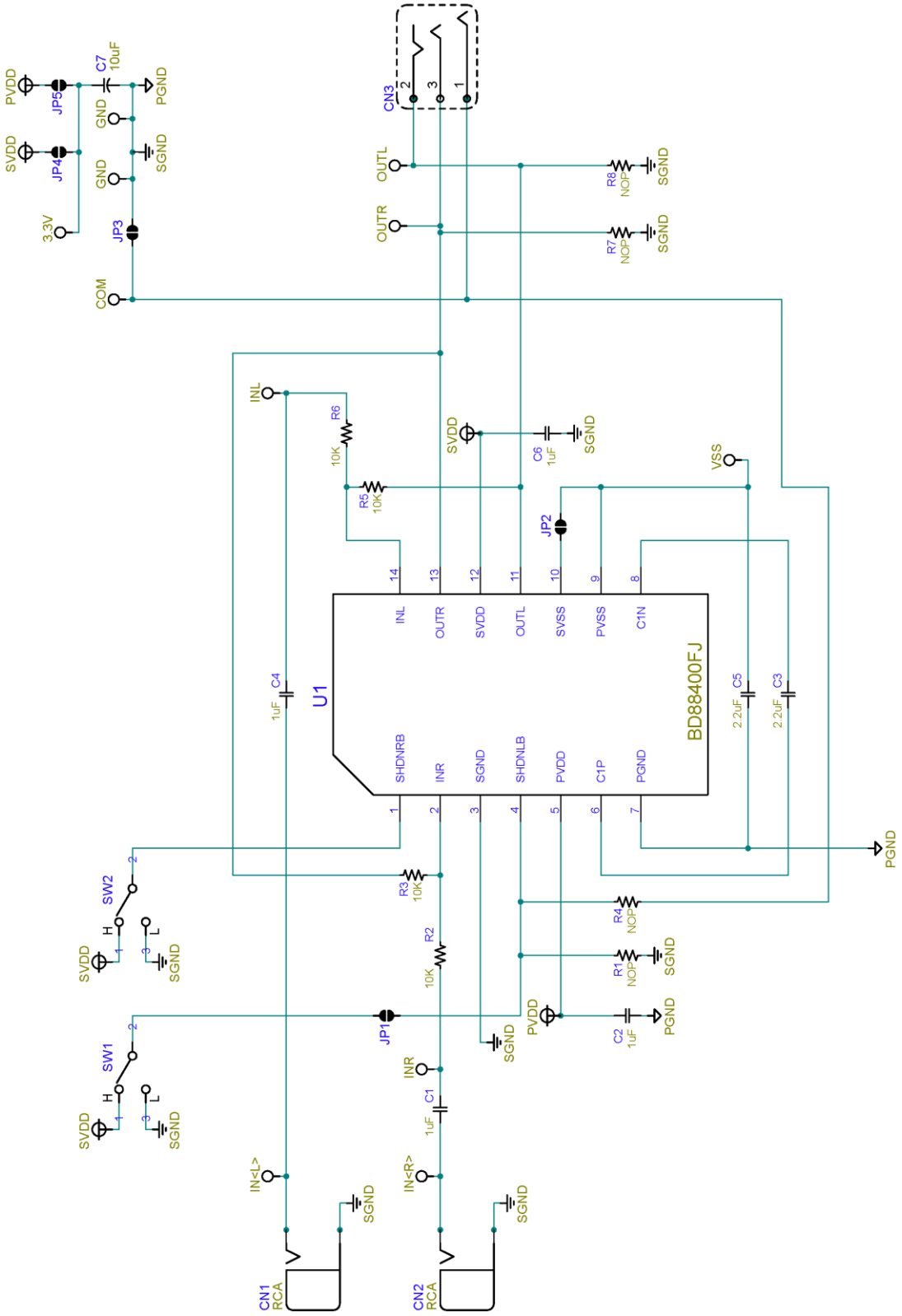
●Conditions

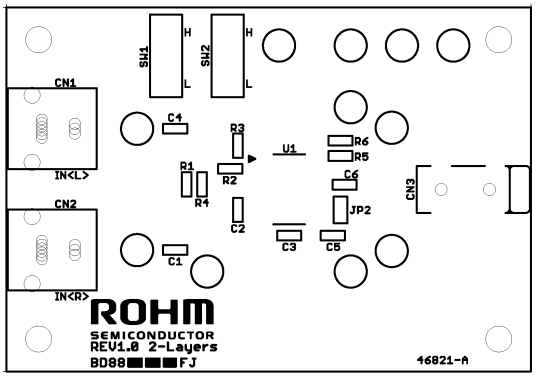
Item	Symbol	Range	Unit
Power Supply Voltage	V_{CC}	+2.4 ～ +5.5	V
Input Voltage	V_{IN}	-2.5 ～ +2.5	V
Minimum Load Impedance	R_L	15	Ω

This document is information of the evaluation board when we evaluated the device.
This information will help you when designing your evaluation board.
Notice, the evaluation board is not available for sale.

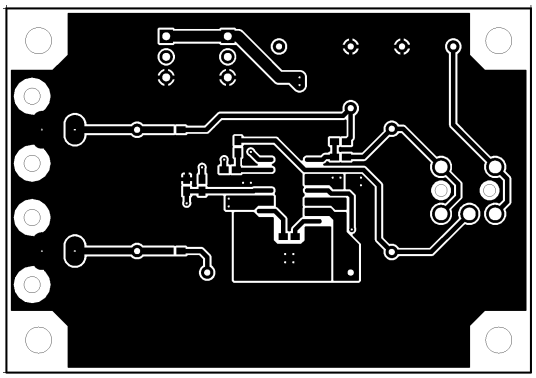
●Circuit Diagram



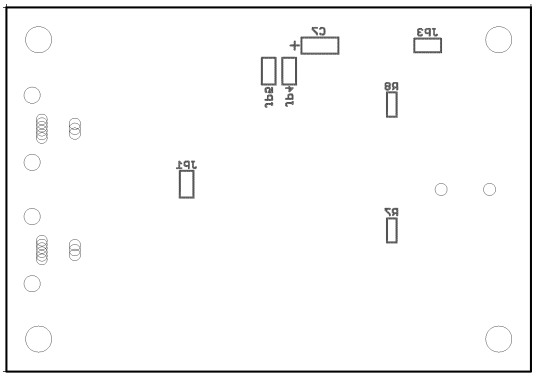
●PCB layout



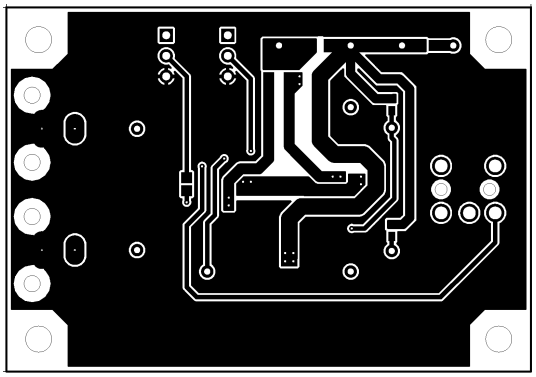
TOP SILKSCREEN – TOP VIEW



TOP LAYER – TOP VIEW

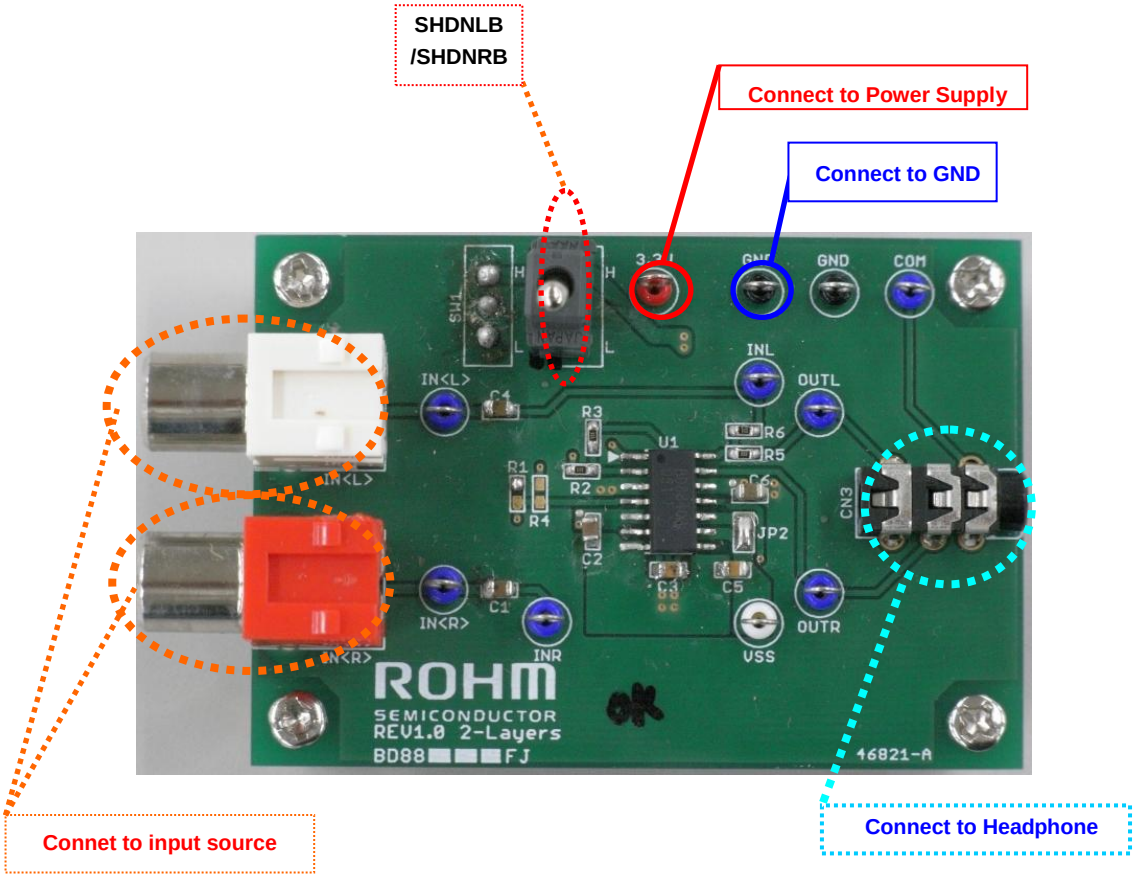


BOTTOM SILKSCREEN – TOP VIEW



BOTTOM LAYER – TOP VIEW

●Usage



① SHDNLB / SHDNRB = L
② Connect the Power Supply pin and GND pin.
③ Connect the audio source.
④ Power On
⑤ SHDNLB / SHDNRB = H
⑥ Input the audio source.

●BOM List

Instance	Device	Value	Size
U1	SOP-J14pin	BD88400FJ	8.65mm x 6.00mm
C3, C5	Ceramic Capacitor	2.2µF	2012
C1,C2,C4,C6	Ceramic Capacitor	1.0µF	2012
C7	Tantalum Capacitor	10µF	3216
R2,R3,R5,R6	Resister	10kΩ	1608
R7, R8	Resister	Open	-
CN3	Headphone Jack	-	ϕ=3.5mm

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