

Figure 1. The Top View of ATDC1934EV1

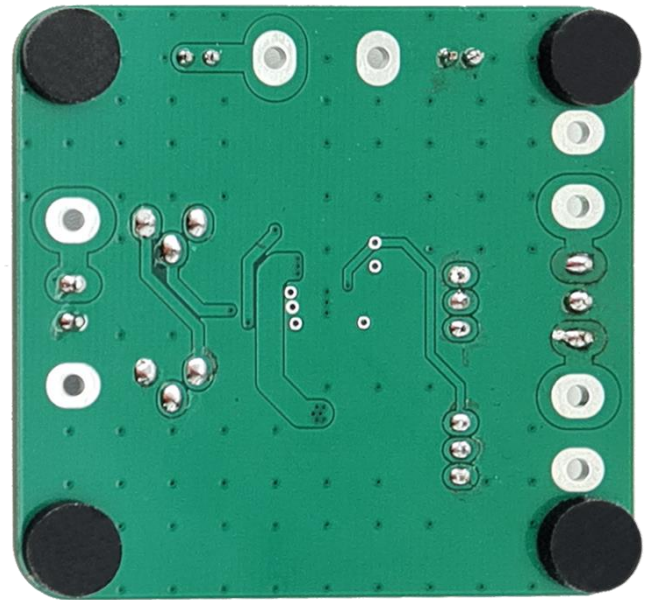








Figure 2. The Bottom View of ATDC1934EV1

ORDERING GUIDE

| | Online Stores | Commission Fee | Unit Price (June 2024) | Buy Now |
|-------------------------------------------------------------------------------------|------------------------------------------------------------|----------------------|------------------------|-----------------------------------------------------------------------------------------|
|  | shop.analogtechnologies.com Our own online store | Zero sale commission | \$19.0/PCs |  * |
|  | SMTZone Our own online store | Zero sale commission | \$19.0/PCs |  * |
|  | Digikey | ≈21% sale commission | \$22.9/PCs |  * |

FEATURES

- Versatile Interface for All Necessary Measurement Nodes
- Easy to Use

APPLICATIONS

Evaluating Step-Down DC/DC Converter ATDC1934.

INTRODUCTION

The ATDC1934 is a wide input range, high-efficiency, and high frequency DC-to-DC step-down switching regulator. It is powered by a DC voltage between 4V to 38V and output current can go up to 0.7A, with a fixed switching frequency of 660kHz.

This evaluation board, ATDC1934EV1, is designed for evaluating the step-down DC/DC converter ATDC1934 conveniently. It is recommended to read this application note with the converter datasheet which provides more detail information about the specifications and application guidance for the converter.

DESCRIPTION

The ATDC1934EV1 Evaluation Board is consisted of a complete application circuit for driving a converter. It can set the output voltage. The output voltage of this board can be set to from 1.8V to 28V by adjusting a potentiometer. This evaluation board has numerous connection pads and terminal connectors for making connections with external components and instruments.

Its physical photos of ATDC1934EV1 are shown in Figure 1 & Figure 2.

The silkscreen layer of the evaluation board is shown in Figure 3 with other top layers, including top silkscreen, top copper, top solder mask, and multilayer (vias). Figure 4 only shows the image of top silkscreen layer. There is no component in the bottom side of the board, so that there is no bottom silkscreen layer image.

There are solder pads on the left, top and the right edges of the board. These pads can be used for

connecting the external instruments or components with and the connections can be made by either soldering wires or clipping by alligator clips.

There are 2 terminal blocks also located on the left and the right side of the board, their connectors are for the same nodes of the solder pads. See the silkscreen image in Figure 4.

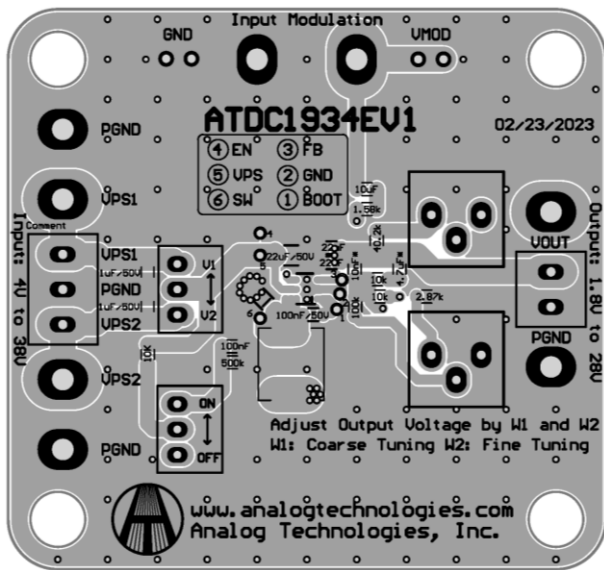


Figure 3. Top Silkscreen Layer with Other Top Layers

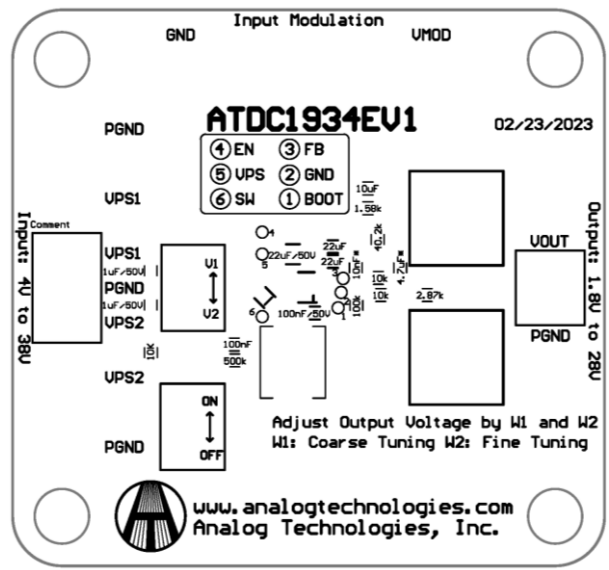


Figure 4. Top Silkscreen

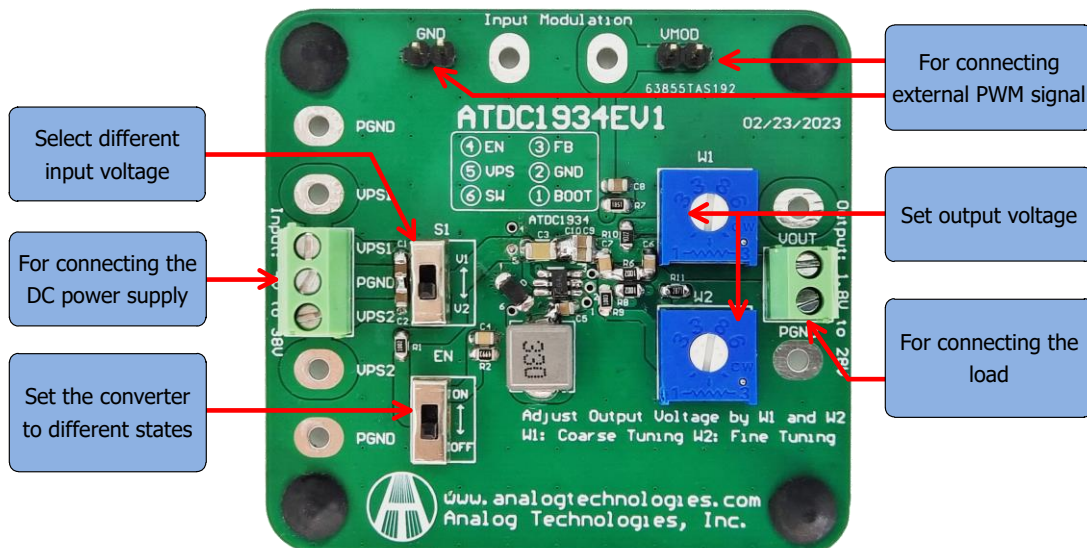


Figure 5. Board Description

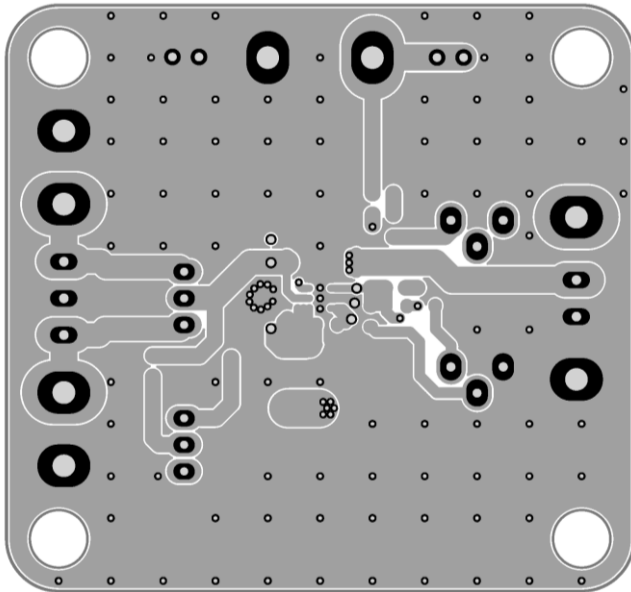


Figure 6. Top Layers without Top Screen Layer

Figure 6 shows the top layers without the silkscreen layer.

Figure 7 below shows the bottom layers, including bottom copper, bottom solder mask, and multilayer (vias). Please notice that this is a “see through” image from the top side.

Figure 8 shows the mirrored bottom layers which is a directly-seen image from the bottom side.

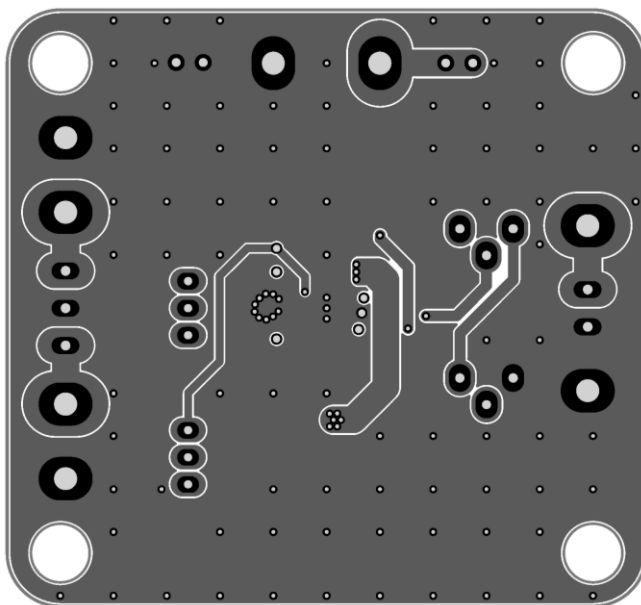


Figure 7. Bottom Layers

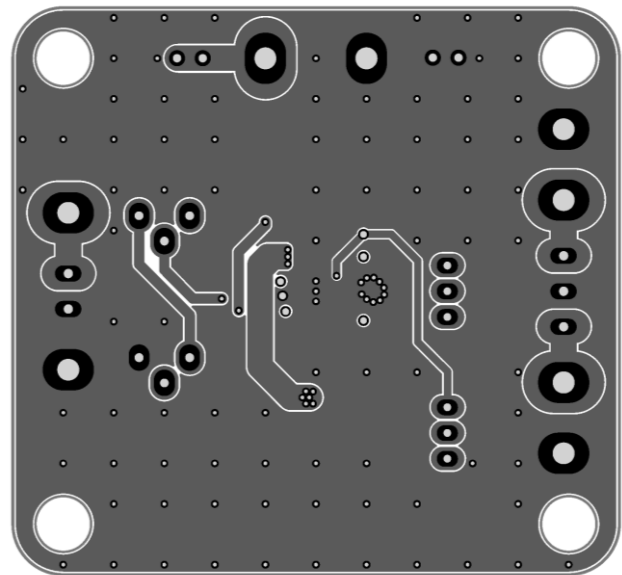


Figure 8. Mirrored Bottom Layers



The converter ATDC1934 is located in the center of the ATDC1934EV1 Evaluation Board. Some of the pins are connected to the connectors of the 2 terminal blocks, and/or the soldering pads on the edges of the board. The names of all these nodes are marked on the board.



GETTING STARTED

1. Find an external power supply and set the output voltage to a desired value. Turn it off, connect to the evaluation board, and then turn power supply on. Do not connect or disconnect the power supply with the board when the power is on. The connection can be made by the terminal block on the left side of the PCB and run the wires to the external power supply.
2. To turn on the converter electronically, turn on the switch EN, the upper position; to turn the converter off, turn on this switch, the lower position.
3. Connect different external power supply by the switch S1. Connect the power supply VPS1, turn on the switch S1, the upper position; to connect the power supply VPS2, turn on this switch, the

ORDERING INFORMATION

Table 1. Ordering Information

| Part Number | Buy Now |
|-------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| ATDC1934EV1 |  *  * |

*: both  and  are our online store icons. Our products can be ordered from either one of them with the same pricing and delivery time.

NOTICE

1. It is important to carefully read and follow the warnings, cautions, and product-specific notes provided with electronic components. These instructions are designed to ensure the safe and proper use of the component and to prevent damage to the component or surrounding equipment. Failure to follow these instructions could result in malfunction or failure of the component, damage to surrounding equipment, or even injury or harm to individuals. Always take the necessary precautions and seek professional assistance if unsure about proper use or handling of electronic components.
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