EK62

INTRODUCTION

The EK62 evaluation kit is designed to provide a convenient way to breadboard design ideas for the SA305EX three Ø BLDC motor driver IC. The PB119 evaluation board is pre-wired for all required and recommended external components including the ones for power supply bypassing and current sensing. The PB119 also includes a breadboard area for constructing your application circuit.

PARTS LIST

Ref	Apex P/N	Description/Vendor	Qty
N/A	HS14	Heat Sink	1
	029372326215 SIP Socket	Loranger	1
N/A	PB119	PC board	1
Many	571-0100	Banana Jack Deltron	22
C1, C4	OX7R105KWN	1 µF cap Novacap 1825B105K201N	2
C2, C5	140-ESRL100V100	100µF cap, Xicon	2
N/A	TW12	Thermal Washer, Apex	1 Box
N/A	91920A865	Standoffs McMaster-Carr	4

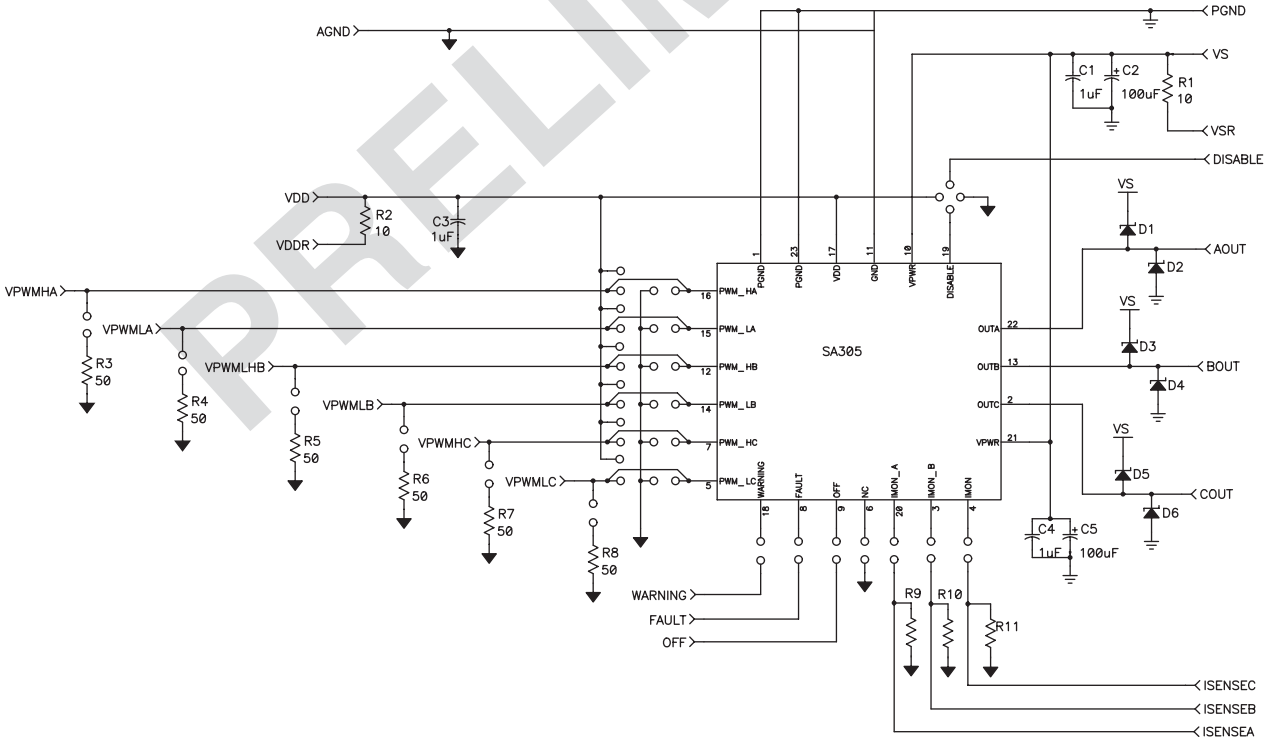
Recommended Components (included in EK kit)

D1-D6	SB5100-T	Diode, 100V, 5A	6

ASSEMBLY

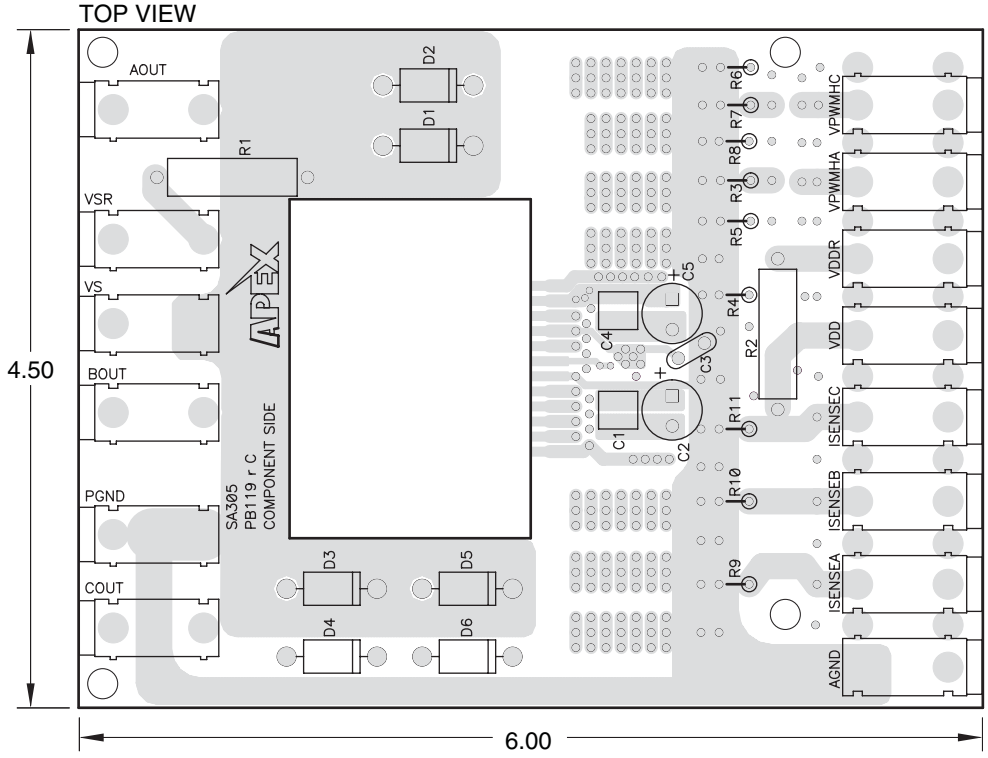
1. Solder surface mount ceramic capacitors C1 and C4 on the component side of the board.
2. Solder the SIP socket into the board. Insert the IC fully into the socket, noting the pin 1 location on the IC and the circuit board.
3. Add 3 resistors for current sense. Refer to SA305U data-sheet for acceptable values and power dissipation ratings of current sense resistors.
4. Install the banana jacks for signals and power. Please note that the banana jacks need to be installed on both sides of the board as shown in figure (only for low voltage signals and Vdd on the bottom end of the board).
5. Mount the electrolytic capacitors C2 and C5 in the specified location in the board.
6. Solder the diodes D1-D6 provided with the kit for high current applications.
7. Mount the standoffs in the four holes provided in the board.
8. If a heat sink is used, position the thermal washer behind the package tab of the IC in such a way that the hole on the washer coincides with the hole on the tab and the heat sink. Attach the IC to the heat sink in such a way that the pins hang out of the heat sink. In the PC board remove the two standoffs on the top of the board. Carefully insert the part with the heat sink into the socket.

SCHEMATIC



PCB LAYOUT

TOP VIEW



BOTTOM VIEW