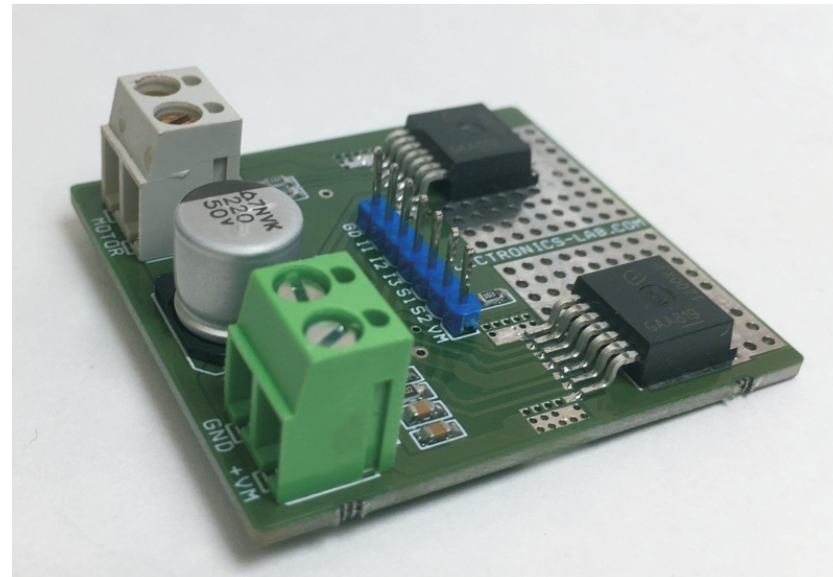


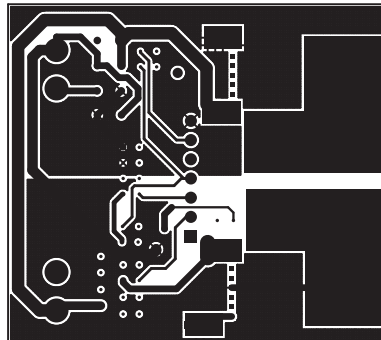
High Power Bidirectional DC Motor Driver

The motor driver circuit can drive brushed DC motor up to 250W continuous load. This project can be controlled with the general logic IO-Ports of a microcontroller. Either an Arduino Uno or other microcontroller can be used as the master. The project contains two IFX007T IC from Infineon. each IC provides half bridge operations featuring one P-channel high side MOSFET and one N-channel low side MOSFET with an integrated driver IC. The IFX007T half-bridge is easy to control by applying logic level signals to the IN and INH pin. When applying a PWM to the IN pin the current provided to the motor can be controlled with the duty cycle of the PWM. With an external R6, R9 resistor connected between the SR pin and GND To set the slew rate of the power switches. The Motor Control board can be easily connected to any Arduino board or microcontroller via headers.

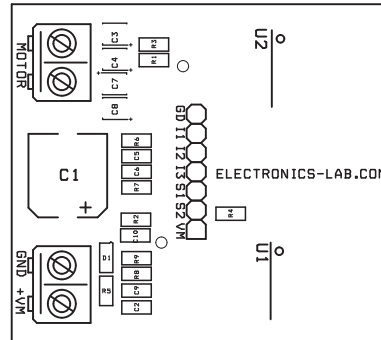
Features

- Brushed DC Motor Control up to 250 W continuous load
- Motor Supply 8 – 24 V nominal input voltage (max. 6 – 40 V)
- Average motor current 30 A restricted due to the limited power dissipation of the PCB (IFX007T current limitation @ 55 A min.)
- Drives one brushed bi-directional DC motor
- Capable of high frequency PWM, e.g. 25 kHz
- Adjustable slew rates for optimized EMI by changing external resistor R6, R9
- Driver circuit with logic level inputs
- Status flag diagnosis with current sense capability
- Protection e.g. against over temperature and overcurrent

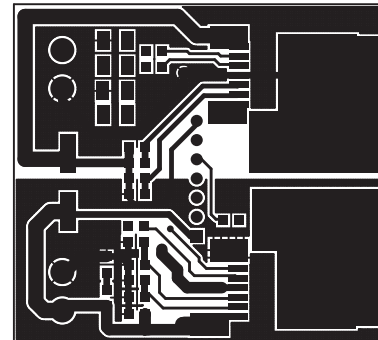




BOTTOM LAYER

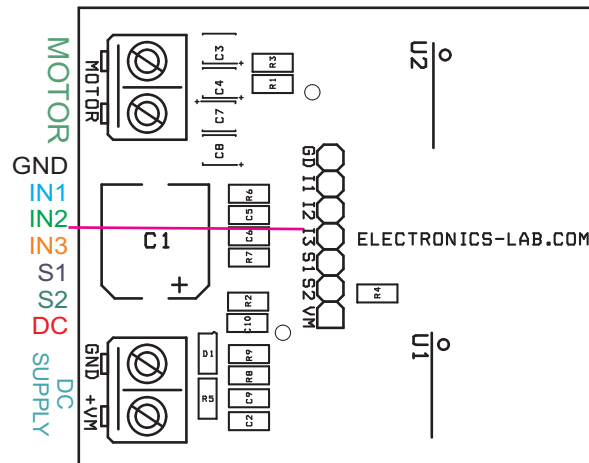


SILK SCREEN TOP



TOP LAYER

PCB DIMENSIONS 49.82 X 44.62 MM



BOM			
SR	QNTY	REF	DESC.
1	1	CN1	2 PIN SCREW TERMINAL
2	1	C1	220uF/50V SMD
3	3	C2,C5,C10	0.1uF/50V SMD 0805
4	4	C3,C4,C7,C8	0.22uF/50V SMD 1206/1210
5	2	C6,C9	1KPF/50V SMD 0805
6	1	D1	LED SMD 0805
7	1	MG1	2 PIN SCREW TERMINAL
8	4	R1,R2,R3,R4	10K SMD 0805
9	1	R5	2K2 SMD 0805
10	2	R6,R9	512E SMD 0805
11	2	R7,R8	1K SMD 0805
12	2	U1,U2	IFX007T
13	1	CN2	7 PIN MALE HEADER