

Test Procedure for the LB11868V Evaluation Board

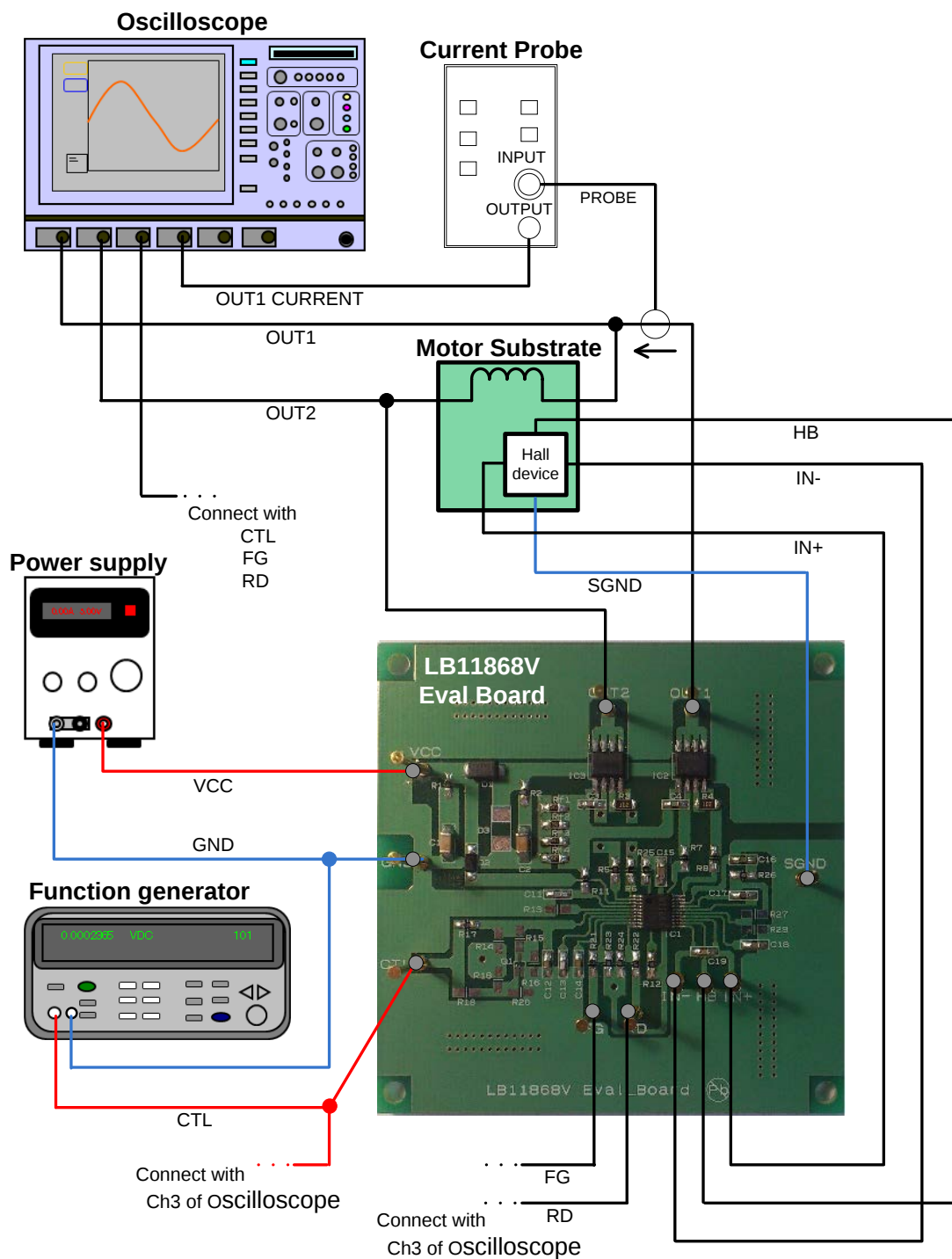


Table: Required Equipment

Equipment	Efficiency
Power supply	12V-3A
Function generator	DC 0V to VREG
Oscilloscope	4 channel
Current probe	
LB11868V Evaluation Board	
Motor	12V type



Test Procedure:

1. Connect the test setup as shown above.
2. Initial check

Start up the motor at $V_{CC} = 12V$.

$CTL = 0V$ (full speed)

Confirm that the motor rotates smoothly.

3. Startup check

Check whether the motor has started up with stability.

Start up the motor at $V_{CC} = 4V$ and $12V$.

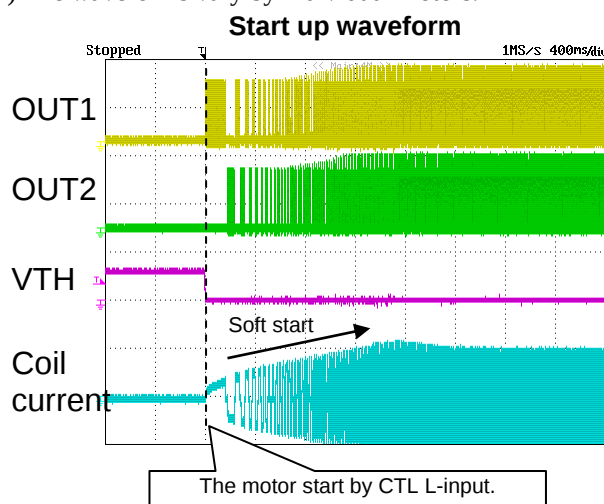
When the CTL voltage is lower than V_{CPWH} (typ = $2.5V$), the motor starts up.

And then check whether the motor starts up at each V_{CC} voltage

Check some waveforms. (Startup waveforms)

Check the $OUT1$, $OUT2$ and V_{TH} voltage waveform with the scopes of CH1, CH2 and CH3, and the output current waveform of $OUT1$ with the scope of CH4 by the oscilloscope.

ex) The waveforms vary by individual motors.



4. Normal rotation check

Check some waveforms.

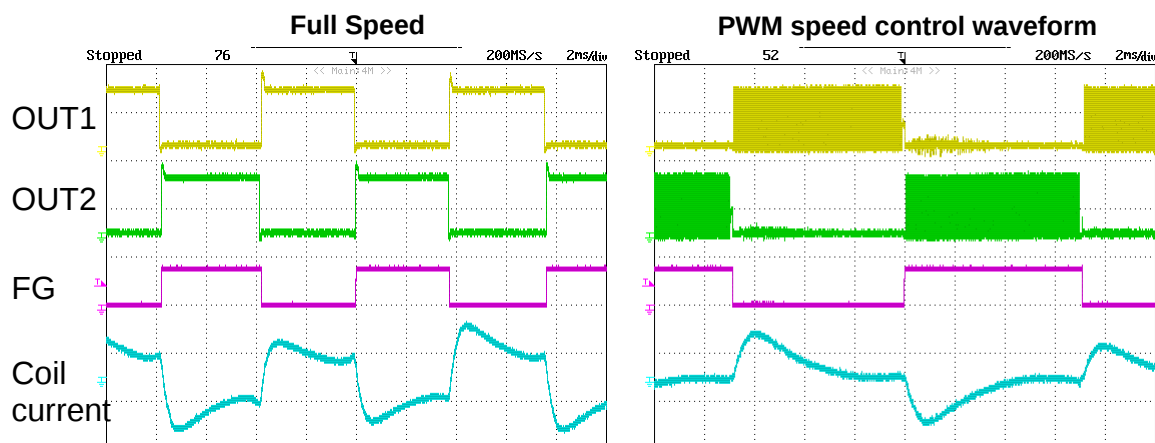
Supply $V_{CC} = 12V$.

$V_{TH} < V_{CPWL}$ (typical = $0.8V$); Full Speed mode

$V_{CPWL} < V_{TH} < V_{CPWL}$; PWM Speed control mode

Check the $OUT1$, $OUT2$ and FG voltage waveform with the scopes of CH1, CH2 and CH3, and the output current waveform of $OUT1$ with the scopes of CH4 by the oscilloscope.

ex) The waveforms vary by individual motors.



5. Lock detection and automatic reset check

Check the lock detection behavior.

Supply $V_{CC}=12V$.

Confirm that the signal of OUT1 and OUT2 are off and RD become H-level when the motor is stopped forcibly by hand.

Then, check the waveform of OUT1, OUT2 and RD voltage in the scopes of CH1, CH2 and CH3, and the output current waveform of OUT1 in the scope of CH4 by the oscilloscope.

Then, check the behavior of automatic reset after motor stop.

A motor restarts from the stop state. Then RD voltage becomes L-level when OUT1 and OUT2 switch once.

ex) Waveform varies by individual motor.

