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Test Procedure for the LV8804FVGEVB Evaluation Board
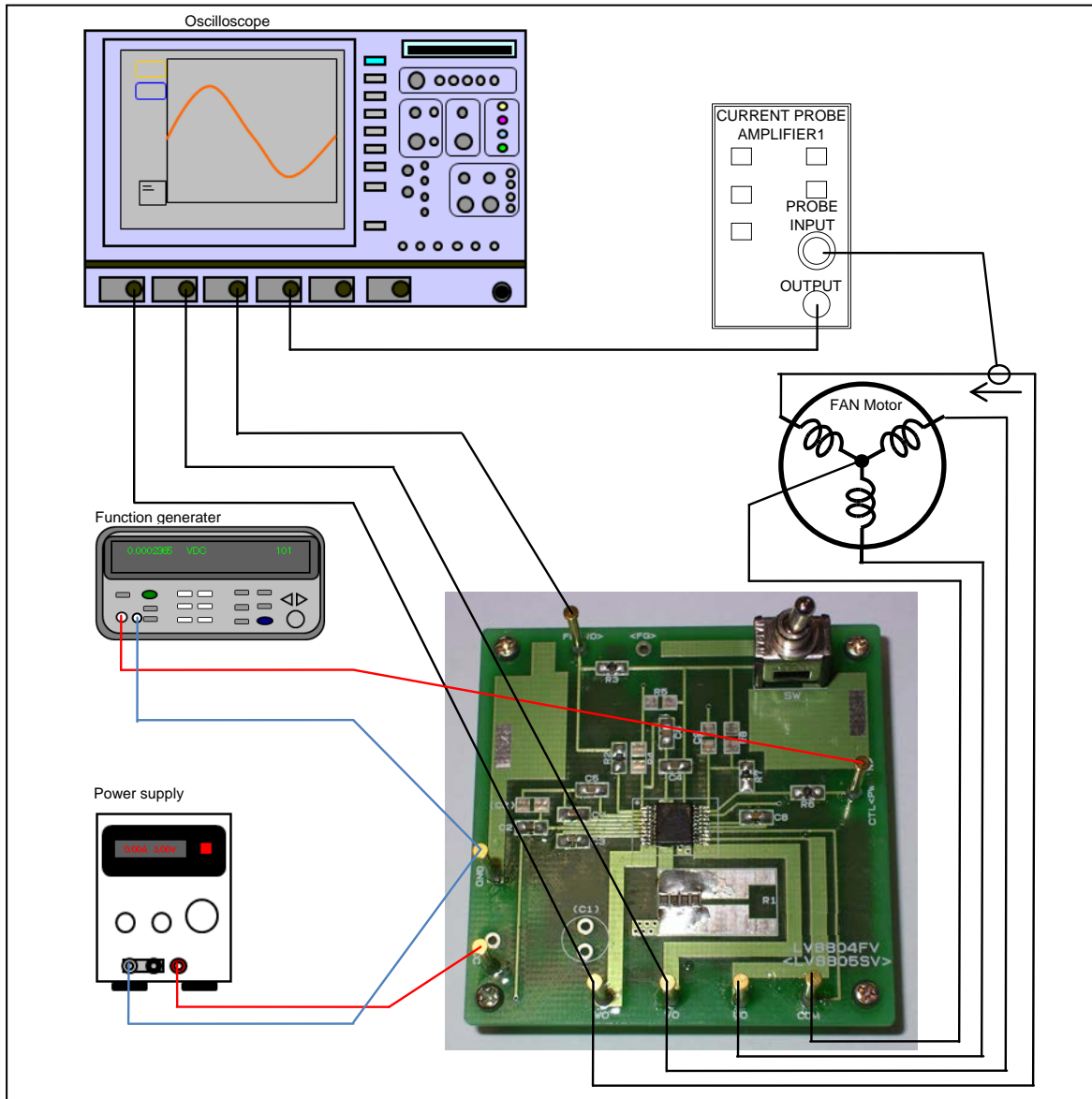

Table: Required Equipment

Equipment	Efficiency
Power supply	12V-1A
Function generator	DC 0-VREG
Oscilloscope	4 channel
Current probe	
LV8804FV Evaluation Board	
Motor	12V-3W

Test Procedure:

1. Connect the test setup as shown above.

2. **Initial check**
   Boot up at the VCC = 12V.
   CTL=0V(PWM 100%)
   Confirm that the motor rotates smoothly and in a right direction.
   Switch the FR switch when the motor rotation direction defferent.

3. **Booting check (StartUp-mode)**
   Check whether a booting of a motor is stable. (Booting)
   Boot up at the VCC = 6V and 12V.
   When CTL voltage vary from 0V to 4V, check to chamge the motor rotation speed.
   And then, at each VCC and CTL voltage check whether a motor boots 100 times in 100times.

   Check the some waveforms. (Booting waveforms)
   Boot up at the VCC =12V.
   Check the WO, VO and FG voltage waveform at scope CH1, CH2 and CH3, and the output
   current waveform of WO at scope CH4 by the Oscilloscope.

   ex) These waveforms are different by each motor.
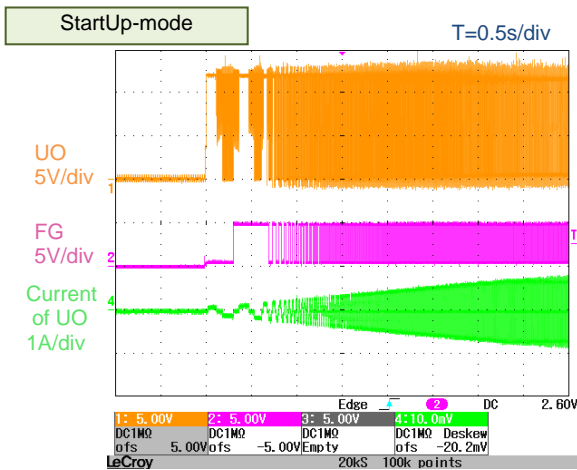
4. **Normal rotation check (Regular-Rotation-mode)**

Check the some waveforms. (Rotation waveforms)
Supply the VCC=12V.
Check the WO, VO and FG voltage waveform at scope CH1, CH2 and CH3, and the output current waveform of WO at scope CH4 by the Oscilloscope.
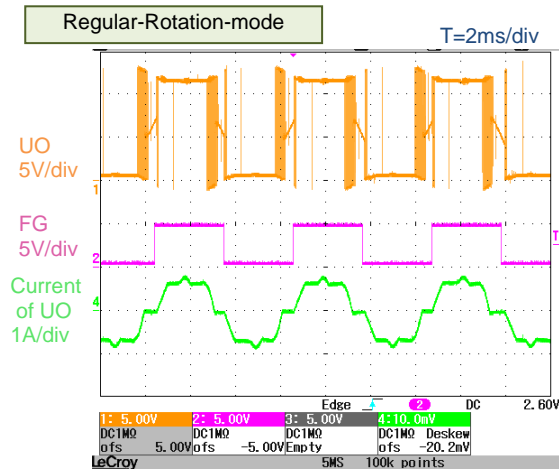
ex) These waveforms are different by each motor.

5. **Lock detection check (Motor-Lock-mode)**
   Check the Lock detection behavior. (Lock)
   Supply the VCC=12V.
   Check the signal of WO, VO and UO is off when stop the Motor by your hand forcibly.
   Then, check the WO, VO and FG voltage waveform at scope CH1, CH2 and CH3, and the output
   current waveform of WO at scope CH4 by the Oscilloscope.
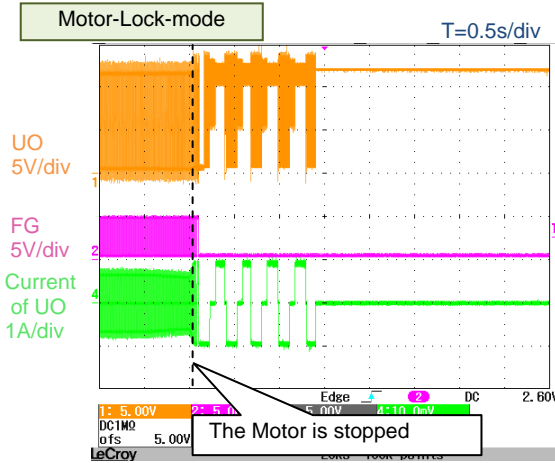
   ex) These waveforms are different by each motor.

6. **Checking result**
   A sample of checking result is shown below.

VCC	CTL voltage	Booting	Rotation speed (rpm)	Rotation waveforms	Io	Lock
	0V	100/100 OK	-	OK	value	OK
12V	1.5V	100/100 OK	-	OK	value	OK
	2.5V	100/100 OK	-	OK	value	OK
	0V	100/100 OK	-	OK	value	OK
6V	1.5V	100/100 OK	-	OK	value	OK
	2.5V	100/100 OK	-	OK	value	OK