

### **Test Procedure for the LV8548MCGEVB Evaluation Board**

#### For stepper motor control

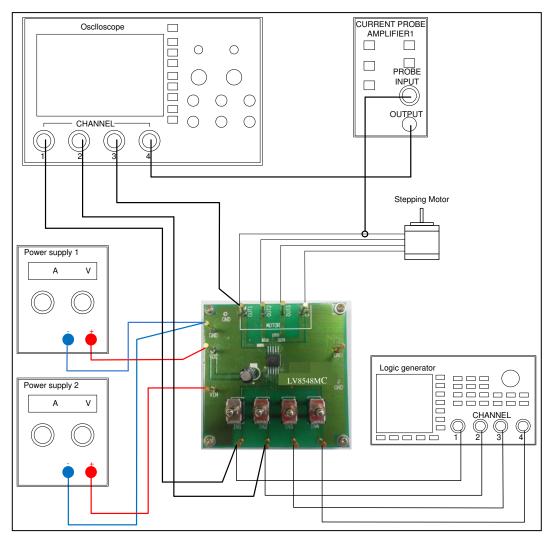


Table1: Required Equipment

Equipment	Efficiency			
Power supply1	25V-3A			
Power supply2	5V-0.5A			
Logic generator	-			
Oscilloscope	4 channel			
Current probe1	-			
LV8548MC Evaluation Board	-			
Stepper Motor	25V-2A			

# ON Semiconductor®

#### **Test Procedure:**

1. Connect the test setup as shown above.

2. Set it according to the following guide.

[Supply Voltage] VCC (4 to 16V): Power Supply for LSI

VIN (1.8 to 5.5V): Logic "High" voltage for toggle switch

[Toggle Switch State] Upper Side: High (VIN)

Middle: Open, enable to external logic input

Lower Side: Low (GND)

#### [Operation Guide]

1. <u>Initial Condition Setting:</u> Set "Open" the toggle switches IN1-IN4.

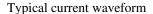
2. <u>Power Supply:</u> Supply DC voltage to VCC and VIN.

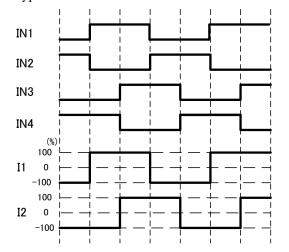
3. <u>Motor Operation:</u> Input the signal which is in condition to want to operate Full-step, Half-step into IN1-IN4.

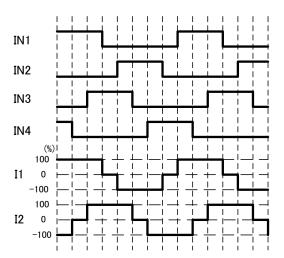
3. Check the IN1 , IN2 and OUT1 terminal voltage at scope CH1 , CH2 and CH3, and the output current waveform at scope CH4.

Table2: Desired Results

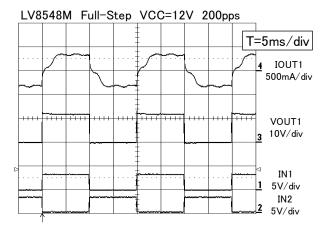
INPUT	OUTPUT					
VCC=12V						
VIN=5V	* Refer to the following waveform					
IN1-IN4=Full-step or Half-step signal						

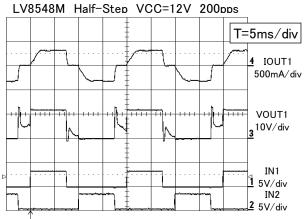














#### For DC motor control

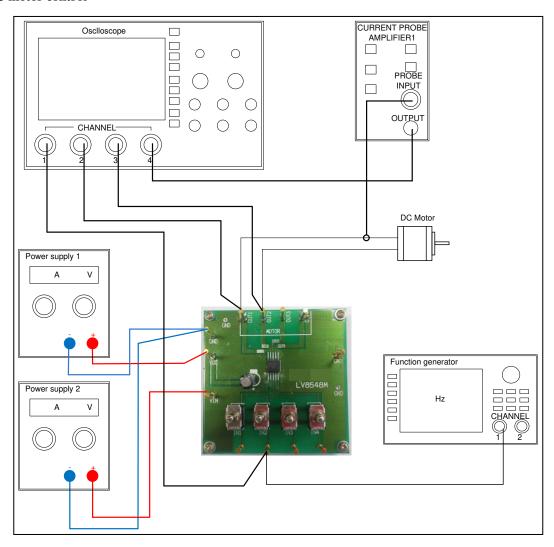


Table3: Required Equipment

Equipment	Efficiency		
Power supply1	25V-3A		
Power supply2	5V-0.5A		
Function generator	200kHz		
Oscilloscope	4 channel		
Current probe	-		
LV8548MC Evaluation Board	-		
DC Motor	25V-2A		



#### **Test Procedure:**

1. Connect the test setup as shown above.

2. Set it according to the following guide.

[Supply Voltage] VCC (4 to 16V): Power Supply for LSI

VIN (1.8 to 5.5V): Logic "High" voltage for toggle switch

[Toggle Switch State] Upper Side: High (VIN)

Middle: Open, enable to external logic input

Lower Side: Low (GND)

#### [Operation Guide]

1. <u>Initial Condition Setting:</u> Set "Open" the toggle switches IN1-IN4.

2. Power Supply: Supply DC voltage to VCC and VIN.

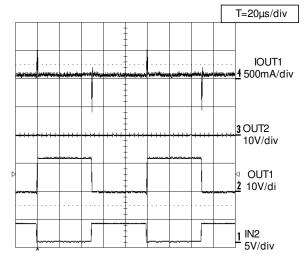
3. Motor Operation: Set IN1, IN2, IN3, and IN4 terminals according to the purpose.

3. Check the IN2, OUT1, and OUT2 terminal voltage at scope CH1, CH2, and CH3, and the output current waveform at scope CH4.

4. Connected in the same way as the 1ch side and measure the 2ch side .

Table4: Desired Results

INPUT	OUTPUT		
VCC=12V			
VIN=5V	* Defeate the following waveform		
IN1=High	* Refer to the following waveform		
IN2=10KHz (Duty50%)			



## ON Semiconductor®

DCM output control logic

Input		Output			Remarks				
IN1	IN2	IN3	IN4	OUT1	OUT2	OUT3	OUT4	Remarks	
L	L	L	L	OFF	OFF	OFF	OFF	Stand-by	
L	L			OFF	OFF				Stand-by
Н	L			Н	L			1CH	Forward
L	Н			L	Н				Reverse
Н	Н			L	L				Brake
		L				OFF	OFF		Stand-by
		Н	L			Н	L	2CH	Forward
		L	Н			L	Н	2CH	Reverse
		Н	Н			L	L		Brake