



Test Procedure for the STK672-442BNGEVB Evaluation Board

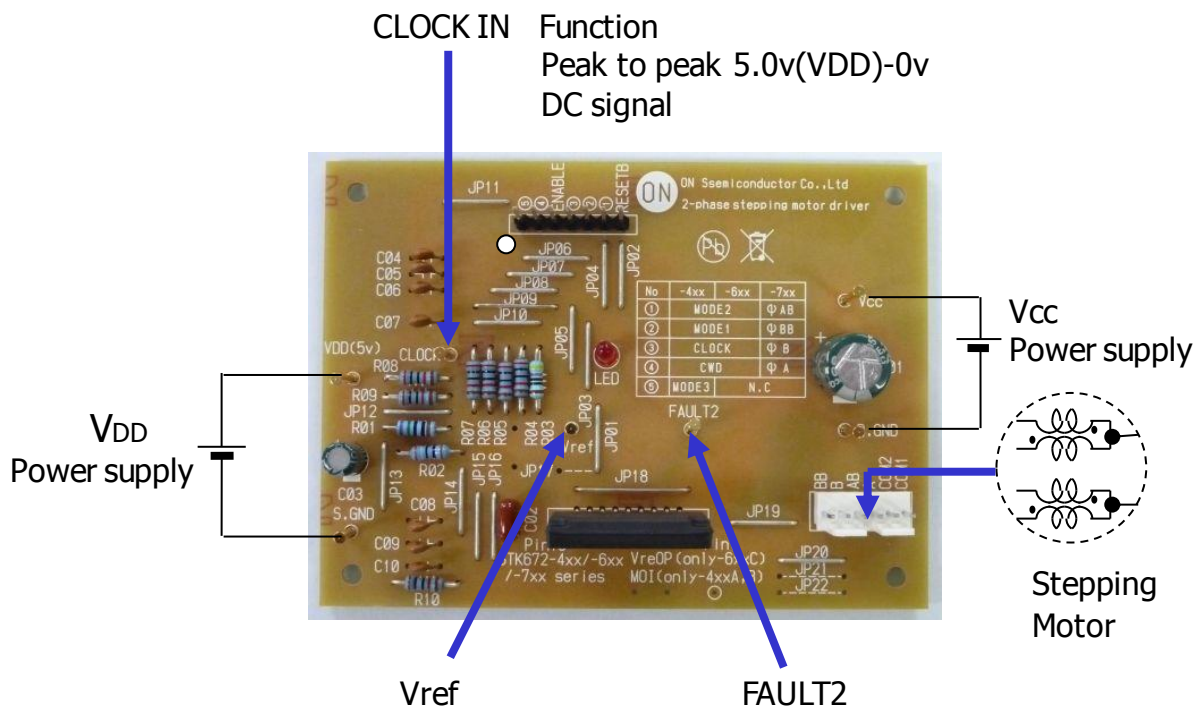


Figure 1: Test Setup

Evaluation Board Setup

[Supply Voltage] Vcc (10 to 46V) : Power Supply for stepper motor
 VDD (5V) : Power Supply for internal logic IC

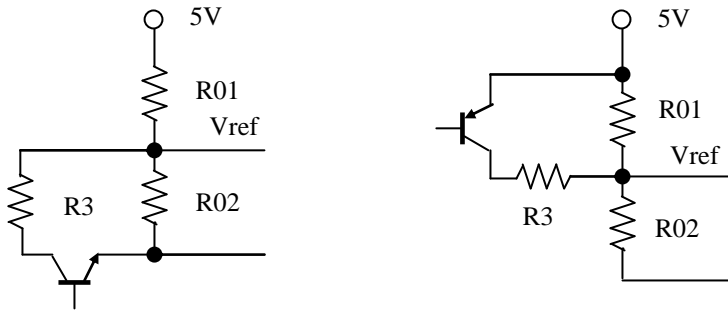
[Operation Guide]

1. Motor Connection:
Connect the motor to OUT(A,AB,B,BB) and COM1,2.
2. Initial Condition Setting:
Set to signal condition No.①,②,③,④,⑤,RESETB and Clock IN.
*As for the evaluation board, the initial state is Hi all terminals.
3. Power Supply:
At first, supply DC voltage to VDD (5.0V).
Next, supply DC voltage to Vcc.
4. Set to ENABLE condition.
When 'ENABLE' terminal becomes Hi, a motor operates.



[Setting the current limit using the Vref pin]

If the motor current is temporarily reduced, the circuit given below is recommended. The variable voltage range of Vref input is 0.2 to 1.8V.



[Setting the motor current]

The motor current, I_{OH} , is set using the Pin 19 voltage, V_{ref} , of the hybrid IC. Equations related to I_{OH} and V_{ref} are given below.

$$V_{ref} \approx (R_{02} \div (R_{02} + R_{01})) \times V_{DD}(5V)$$

$$I_{OH} \approx (V_{ref} \div 4.9) \div R_s$$

The value of 4.9 in Equation (2) above represents the V_{ref} voltage as divided by a circuit inside the control IC. R_s : 0.122Ω (Current detection resistor inside the hybrid IC)