

Test Procedure for the STK672-440BNGEVB Evaluation Board

The following steps detail the basic test procedure for all these boards:

Used STK672-440BN/-442BN-E

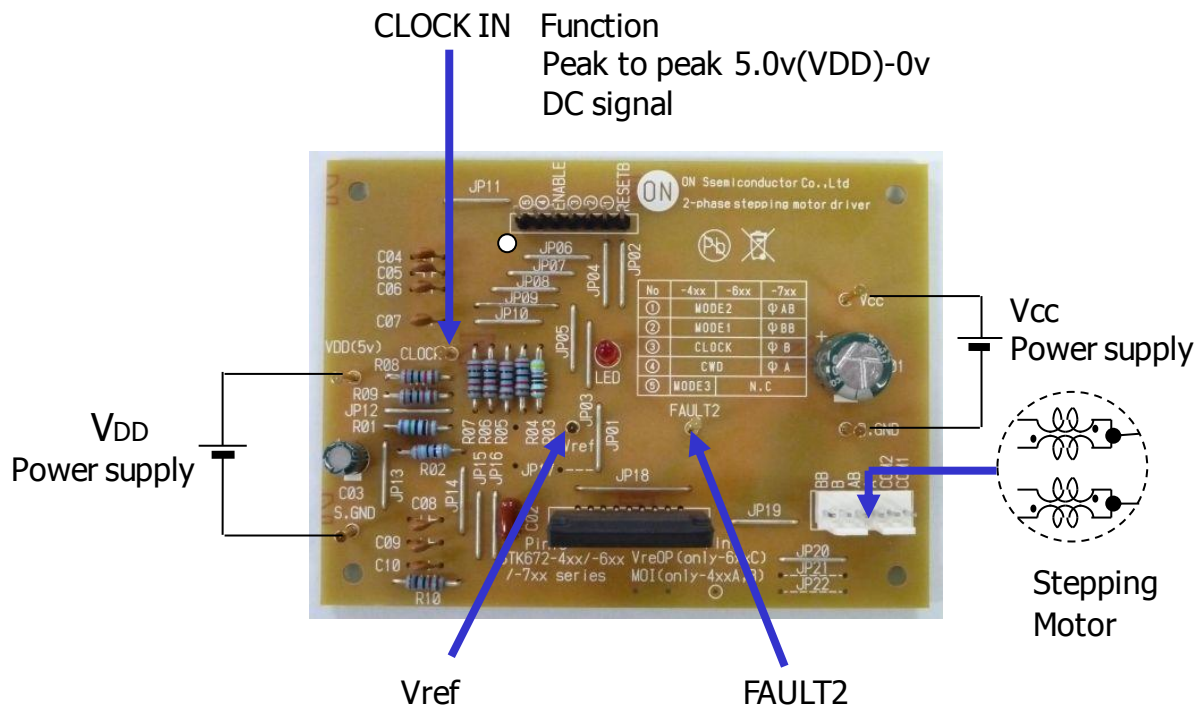


Figure 1: Test Setup

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).

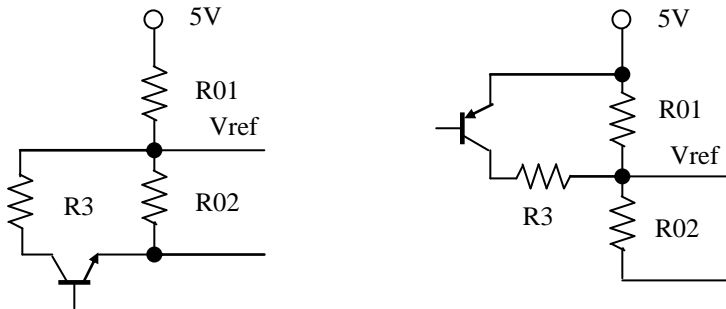


Next, supply DC voltage to Vcc.

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.

$$V_{ref} \approx (R02 \div (R02+R01)) \times V_{DD}(5V)$$

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

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)



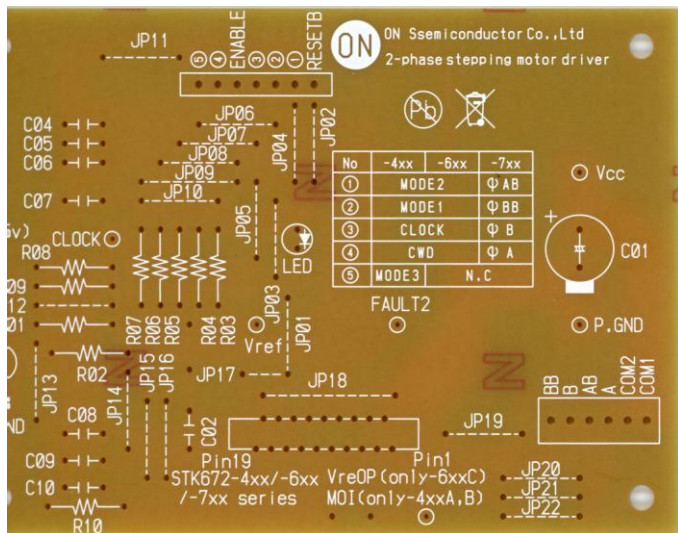
STK672-440BNGEVB board Specifications

(Substrate recommended for operation of STK672-xxx)

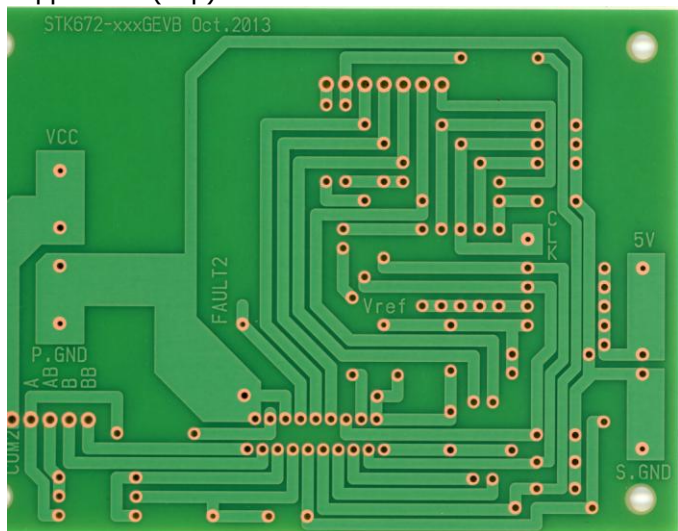
Size : 95mm × 70mm × 1.6mm 1-layer board

Material: Phenol

Silk side



Copper side (35μ)



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