SANYO Semiconductors
An ON Semiconductor Company

Test Procedure for the STK672-040GEVB Evaluation Board

[Supply Voltage]	Vcc1 (10 to 45V)	: Power Supply for stepping motor
	Vref (0 to 2.5V)	: Const. Current Control for Reference Voltage
	Vcc2 (5V)	: Power Supply for internal logic IC

[Toggle Switch State] ON Side: Low (GND)
OFF Side: High (5V pull up resistors)

[Operation Guide]

1. Motor Connection:
   Connect the stepping motor to A, AB, B, BB, COMA, and COMB.

2. Initial Condition Setting:
   Set "ON" the slide switch RESETB, and set "ON or OFF" M1 to M5 depend on step mode, and set "ON or OFF" CWB, and set low CLK.

3. Power Supply:
   At first, supply DC voltage to Vcc2, and VREF.
   Next, supply DC voltage to Vcc1.

4. Ready for Operation from Standby State:
   Turn "OFF" the slide switch RESETB.
   Output A and BB are set initial position 70%.

5. Motor Operation: Input the CLK signal into the terminal CLK.

[Setting the motor current]

The motor current IOH is set by the Vref voltage on the hybrid IC pin 8. The following formula gives the relationship between IOH and Vref.

STK672-040-E
IOH=(1/3) x Vref/Rs, Rs: The hybrid IC internal current detection resistor(0.33Ω 3%)
Vref=Vcc2(5.0V) x R02/(R01 + R02)=IOH x Rs x 3
In case of IOH=1.2A, Vref=1.2 x 0.33 x 3=1.19V

STK672-050-E
IOH=(1/3) x Vref/Rs, Rs: The hybrid IC internal current detection resistor(0.2Ω 3%)
Vref=Vcc2(5.0V) x R02/(R01 + R02)=IOH x Rs x 3
In case of IOH=2.0A, Vref=2.0 x 0.2 x 3=1.2V

STK672-060-E
IOH=(1/7.66) x Vref/Rs, Rs: The hybrid IC internal current detection resistor(0.22Ω 3%)
Vref=Vcc2(5.0V) x R02/(R01 + R02)=IOH x Rs x 7.66
In case of IOH=0.8A, Vref=0.8 x 0.22 x 7.66=1.35V

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