Test Procedure for the LV8771VH

An ON Semiconductor Company
05/25/2012


Table3: Required Equipment

| Equipment | Efficiency |
| :--- | :--- |
| Power supply1 | $35 \mathrm{~V}-5 \mathrm{~A}$ |
| Power supply2 | $5 \mathrm{~V}-0.5 \mathrm{~A}$ |
| Power supply3 | $10 \mathrm{~V}-1 \mathrm{~A}$ |
| Data generator |  |
| multimeter | 4 channel |
| Oscilloscope |  |
| Current probe |  |
| LV8771VH Evaluation Board | $35 \mathrm{~V}-3 \mathrm{~A}$ |
| Stepping Motor |  |

## Test Procedure:

1. Connect the test setup as shown above.
2. Set it according to the following guide.
[Supply Voltage] VM (9 to 32V): Power Supply for LSI
VREF (0 to 3V): Const. Current Control for Reference Voltage
VDD (2 to 5V): Logic "High" voltage for toggle switch
[Toggle Switch State] Upper Side: High (VDD)
Middle: Open, enable to external logic input
Lower Side: Low (GND)
[Operation Guide]
3. Initial Condition Setting: Set "Open or Low" all switches.
4. Motor Connection: Connect the Motors between OUT1A and OUT1B, between OUT2A and OUT2B.
5. Power Supply: Supply DC voltage to VM, VREF and VDD.
6. Ready for Operation from Standby State: Turn "High" the ST toggle switch.
7. Motor Operation: Set $\mathrm{I} 01, \mathrm{I} 02, \mathrm{PH} 1, \mathrm{I} 02, \mathrm{I} 12$ and PH 2 terminals according to the purpose.
8. Check VREG5 and VG terminal voltage at multimeter.
9. Check the 101 , I 11 and PH 1 ; terminal voltage at scope $\mathrm{CH} 1, \mathrm{CH} 2$ and CH 3 , and the output current waveform at scope CH 4 .
10. Switch to channel $2(\mathrm{IO}, \mathrm{I} 12, \mathrm{PH} 2)$ as well as channel $1(\mathrm{I} 01, \mathrm{I} 11, \mathrm{PH} 1)$ and measure it.

Table4: Desired Results

| INPUT | OUTPUT |
| :--- | :--- |
| $\mathrm{VM}=24 \mathrm{~V}, \mathrm{VDD}=5 \mathrm{~V}, \mathrm{VREF}=1.5 \mathrm{~V}$ | VREG5=4.7V to 5.3 V |
| $\mathrm{ST}=\mathrm{H}, \mathrm{FC}=\mathrm{L}$ | $\mathrm{VG}=28 \mathrm{~V}$ to 29.8 V |



Full-step
Half-step (full torque)

