ON Semiconductor®

NV70501R10DBGEVB Evaluation Board Testing Procedure

Equipment and Instruments required:

(1) NV70501R10DBGEVB Evaluation Board (DUT)

(2) NCV7052XGEVK Automotive Stepper Motor Driver Kit

(3) Function Generator – square wave signal 0 – 3.3V (Amplitude 3.3 V, Offset 1.65V), frequency 4 kHz

(4) NCV70501 SW Application Support GUI

Testing Procedure:

a) Install NCV70501 SWAS GUI (4) on your PC (see attached Quick Start Manual)

b) Connect NCV7052XGEVK Evaluation Kit (2) to power supply and PC via ECUSIM MKII USB to SPI converter (see Manual)

c) Connect Function Generator to "NXT" test point (it is located close to the inserted daughter board) and ground bar on EVK (2)

d) Plug NV70501R10DBGEVB Evaluation Board (DUT) (1) into Stepper Motor Driver Kit (2).

e) Run NCV70501 SW GUI (4), on tab "01 - Main" push "SPI INTERFACE CONNECT", you should see message about successful connection to kit "USB to SPI Communicator Connected, DRV NAME: ECUSIM MKII 500".

f) On Tab "02 – APPLICATION CMD" push "READ ALL DIAGNOSTIC" to clear possible flags, set "R/H POL" bit to 1, select "IRUN = 300 [mA]" and push "UPDATE ALL & ENABLE MOTOR"

g) If Motor rotates, the NV70501R10DBGEVB Evaluation Board is working properly and was successfully tested

h) Push "DISABLE MOTOR & UPDATE ALL" to stop the motor