# Test Procedure for the NV706271R2DBGEVB Evaluation Board



For the test of this DUT, the ON semiconductor evaluation kit for the AMIS\_306xx and ON Semi\_30627 has to be used. The procedure assumes that the test engineer is familiar with the use of the evaluation board and the GUI software.

Wire up the Evaluation kit and install the DUT.





At initial start-up place the jumpers at the evaluation board as follows:

HW0 at GND position HW1 at GND position HW2 at GND position SWI at GND position

Power up the evaluation board.

Start the GUI software of the kit.



Adjust USB operation in the options menu. Guarantee that dummy LIN frames are regularly send (400ms).

After LIN set-up start the motor commander.











### **Tests:**

#### 1) Device accessibility via LIN at LIN address 00:

Perform a GetFullStatus command 2 times by clicking the GetFullStatus button twice.

The DUT should respond with an in frame status respond: 7D 80 00 00 xx xx 10 74 00

#### 2) SWI input check:

Remove jumper SWI and perform again a GetFullStatus command: Check if the status bit is presenting that the SWI input is changed.

The DUT should respond with an in frame status respond: 7D 80 00 00 xx xx 00 74 00

#### 3) Device accessibility via LIN at LIN address 40:

Switch off the Evaluation board and place jumper HW0 to position VDD Switch on the Evaluation board.

First perform a GetFullStatus command 2 times at LIN address 00 by clicking the GetFullStatus button twice.

Change the LIN address in the GUI to 40:

ON Semiconduc	tor ON
	_
	0621 C AMIS-30623 C AMIS-30627
	LiN addresses
	3rd motor 03 V
	1st motor 40 💌 4th motor 04 💌

Again perform a GetFullStatus command.

Now, the DUT should respond with its status: 7D C0 00 00 00 00 00 74 00

#### 4) Device accessibility via LIN at LIN address 20:

Switch off the Evaluation board and place jumper HW0 back to position GND and place jumper HW1 to VDD Switch on the Evaluation board.

Repeat the command as mentioned in the previous test with the LIN address set to 20. Check again the DUT status response: 7D C0 00 00 00 00 74 00

#### 5) Device accessibility via LIN at LIN address 10:

Switch off the Evaluation board and place jumper HW1 back to position GND and place jumper HW2 to VBAT Switch on the Evaluation board.

Repeat the command as mentioned in the previous test with the LIN address set to 10. Check again the DUT status response: 7D C0 00 00 00 00 74 00



#### 6) Motor Operation in Forward and Backward directions:

Set the motor parameters as presented in following picture:

1621 C AMIS-30623 C AMIS-30627
LiN addresses
Broad 2nd motor 02 -
3rd motor 03 👻
1st motor 00 💌 4th motor 04 💌
Set Motor Paramameters
89 SetMotorParam
• • • • • • • • • • • • • • • • • • •
<ul> <li>Ihold[3:0] 03</li> </ul>
▼ Vmax[3:0] 0C
✓ Vmin[3:0] 03
Accishane
Shaft
🗖 SecEn
▲ ► SecPos[10:0] 00
PWMfreq PWMJen I-boost
Tstab[1:0] 00

Give a position with the position slider and click the Set Position Command button. The motor should perform a positioning to the given position.

Slide back the position slider and click the Set Position Command button again. The motor should now perform a motion in opposite direction.

The test is positively finished when above responses and reactions are given. Switch off the Evaluation kit and remove the DUT.

## When removing the DUT, prevent for bending the connector pins!

3/30/2013





DUT: ..... Date: ..... Operator: .....

Test:	Description:	Passed:
1	Device accessibility via LIN at LIN address 00	
2	SWI input check	
3	Device accessibility via LIN at LIN address 40	
4	Device accessibility via LIN at LIN address 40	
5	Device accessibility via LIN at LIN address 40	
6	Motor Operation in Forward and Backward directions	

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