Test Procedure for the NCV7685MIDR1GEVK Evaluation Kit

Initial setup:

1. Connect jumper OL1
2. Return function switches to default OFF position on the BCM board
3. Turn OFF the KEY switch
4. Connect Cables for CON-FCN, CON-KEY and CON_DIAG

Required Equipment:

- Bench power supply with A-meter with minimum current limit of 2A
- Multimeter
- NCV7685MIDR1GEVB board
- NCV7685BCMR1GEVB board

Test procedure (Mid-End Variant)

1. Connect setup as shown above
2. Apply 14V using the Battery input DC connector.
3. By default, no current consumption is expected.
4. By activation the TAIL switch, the appropriate LEDs on the NCV7685MIDR1GEVB module should be turned ON.
5. The Green indication diodes D100, D101, D102 and D103 is turned ON. The current consumption should be around 119 mA
6. If the TURN switch is activated, then the wiping turn effect is automatically played.
7. If all functions are activated, then the current consumption is around 460 - 743 mA at 14V.

Test procedure (Open Load condition)

1. Apply 14V on the supply connector.
2. Activate the STOP button.
3. Open the OL1 jumper to emulate the Open Load condition
4. The Fault status will be propagated to the BCM module by red indication LED.

Test procedure (Fail Safe condition)

1. Apply 14V on the supply connector.
2. Activate the TAIL and TURN switch.
3. The appropriate LEDs are enabled with the animation.
4. Push the SW button and keep the button pushed to emulate the MCU interruption.
5. The D102 is turned OFF, there is no VDD supply. And also the turn LEDs follows the turn switch directly without any animation. The performance in this case is the same as in case of Low-End Variant.,
6. To return to the normal mode, release the SW switch.

Test procedure (Turn Signal behavior)

1. Apply 14V on the supply connector.
2. Activate any signal together with TURN.
3. Turn animation is played at least 3 times if another signal is activated.
4. If the only TURN signal is active, with deactivation of the switch, the animation is interrupted immediately

5. The goal is to have key switch activate first and then activate the appropriate switches, to have more realistic styling.