



Test Procedure for the NCV7450V1GEVB Evaluation Board

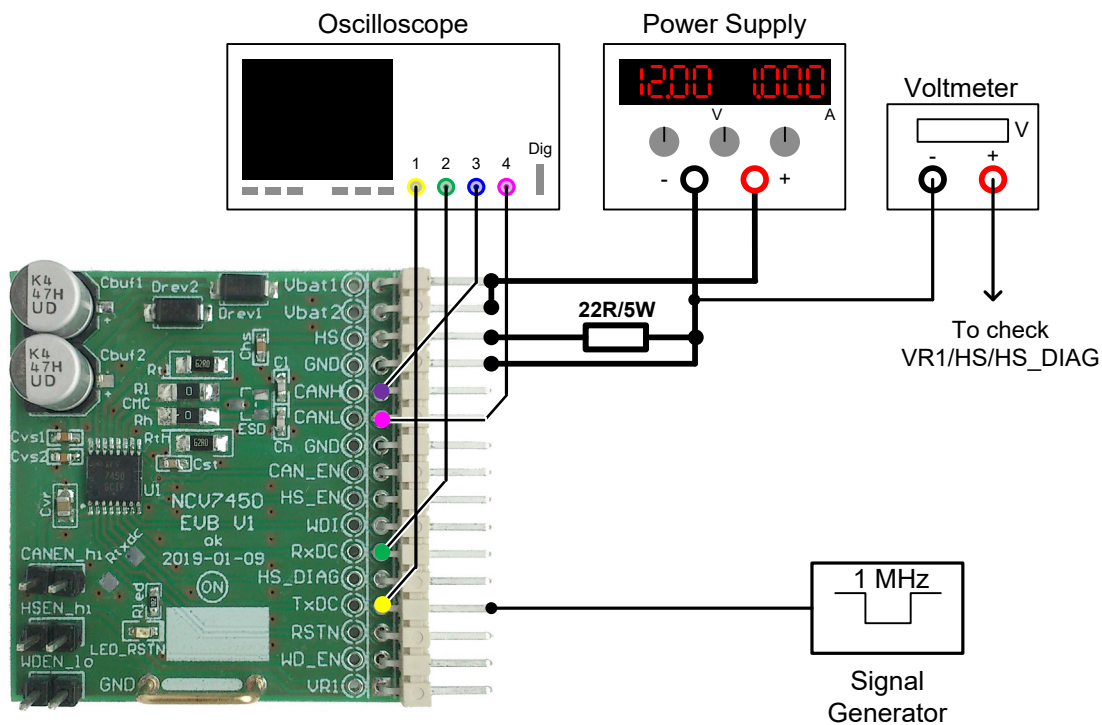


Figure 1: Test Setup Configuration

Required Equipment

- Oscilloscope
- Bench Power Supply
- Voltmeter
- Signal Generator
- CAN Evaluation Board



Test procedure Step 1 (Low power mode):

1. Connect the setup as shown above
2. Close (short) W DEN_lo
3. Open CANEN_hi
4. Open HSEN_hi
5. Check VR1
6. Check RxD C, CANH, CANL, RSTN
7. Check I_{vbat}.

Table 1: Desired Results

VR1
LED_RSTN off
RxD C HIGH
CANH OFF
CANL OFF
I _{vbat} < 0.05 mA

Test procedure Step 2 (Normal mode, CAN recessive):

1. Open W DEN_lo
2. Close (short) CANEN_hi
3. Check I_{vbat}.

Table 2: Desired Results

RxD C HIGH
I _{vbat} = < 2 mA – 12 mA >
LED_RSTN flashing

Test procedure Step 3 (Normal mode, CAN square-wave):

1. Close (short) W DEN_lo
2. Apply Square-wave signal to TxDC (0-5 V, 1 MHz)
3. Check AC characteristics of RxD C, CANH, CANL

Table 3: Desired Results

RxD C HIGH / LOW
I _{vbat} = < 10 mA – 30 mA >
CANH RECESSIVE / DOMINANT
CANL RECESSIVE / DOMINANT

Test procedure Step 4 (Normal mode, HS driver on):

1. Close (short) HSEN_hi
2. Check HS, HS_DIAG

Table 4: Desired Results

HS
HS_DIAG LOW



DC Characteristics

	MIN	TYP	MAX
VR1	4.9 V	5.0 V	5.1 V
RxDC LOW		0 V	0.4 V
RxDC HIGH	2 V	VR1	
HS DIAG LOW			2 V
HS DIAG HIGH	2 V	VR1	
CANH OFF			0.1 V
CANL OFF			0.1 V
CANH RECESSIVE	2 V	VR1/2	3 V
CANL RECESSIVE	2 V	VR1/2	3 V
CANH DOMINANT	2.75		VR1
CANL DOMINANT	0		2.25 V
HS	Vbat – 1.5 V		

AC Characteristics

