

Test Procedure for the NCN8024DWGEVB Evaluation Board

EQUIPMENT

Description	Main Features	Example of Equipment (Note 1)	Qty.
Regulated Power Supply	200 mA DC current capability	Tektronix PS2520G	2
Multimeter	-	Keithley 2000 or 2001	2
Source meter	-	Keithley 2400	1
Oscilloscope	500 MHz Bandwidth, four channel scope, min 1Mbit memory per channel (note 2)	Tektronix TDS744, 754 or 784 / TDS5054 series or Lecroy WR5060 TDS5104B, 1 GHz, 5GS/s	1
Voltage probe	4 probes 500MHz Bandwidth	Tektronix or Lecroy	4
Waveform generator	Pattern generator	Agilent 81104A 80 MHz or HP8110A 150MHz 2 outputs	1
SMB Cable	-	External Clock Input	1

Note:

- 1. Equipment used in the context of this Application Note Manual
- 2. Greater Scope memory per channel offers better resolution

TEST PROCEDURE

See Figure 2.

Initial Setups (Figure 2)

The initial setups given here are recommended before starting measurements on the board.

- Set the CMDVCC/ in the OFF position (High).
- Set CLKDIV1 and CLKDIV2 into low position (lowest frequency Fclkin)
- Set 5V/3Vbar into a 5V position
- As a precaution, turn the 1 kΩ potentiometer to obtain a resistor output value of 1 kΩ, and then connect the jumper.

DC Power Supplies

Two power supplies are used to bias the demo board. VDDP is the input voltage of the DC-DC converter. VDD is the "digital" power supply which biases the input stages of the NCN8024 device (control and signal inputs). VDD and VDDP must be connected to the board for a correct operation.

- Connect the VDD power supply using the 2 pin male connector J1.
- Connect the VDDP power supply using the 2 pin male connector J2.
- Power up VDDP in the range 4.5 V-5.5 V.
- Power up VDD in the range 2.7 V-5.5 V.

Clock Frequency

CLKDIV1 and CLKDIV2 select the frequency divider according to the table given below.

CLKDIV1	CLKDIV2	Divider
1	0	DIV 1/1
1	1	DIV 1/2
0	1	DIV 1/4
0	0	DIV 1/8

Card presence

The socket we use is a normally open, so CDR-PRES/ has been chosen; nevertheless the CRD_PRES and CRD_PRES/ test points can also be used for signaling the presence of a card and starting up the circuit.

Start the measurement

To start the measurments, set the board as follows:

- Set CLKDIV1 and CLKDIV2 to select the correct frequency.
- Set 5V/3Vbar to select the correct output voltage.
- Jumpers:
 - \circ 1kΩ potentiometer jumper: not connected to start measurement.
- Finally, toggle /CMDVCC from High to Low to start the device (activation sequence run).



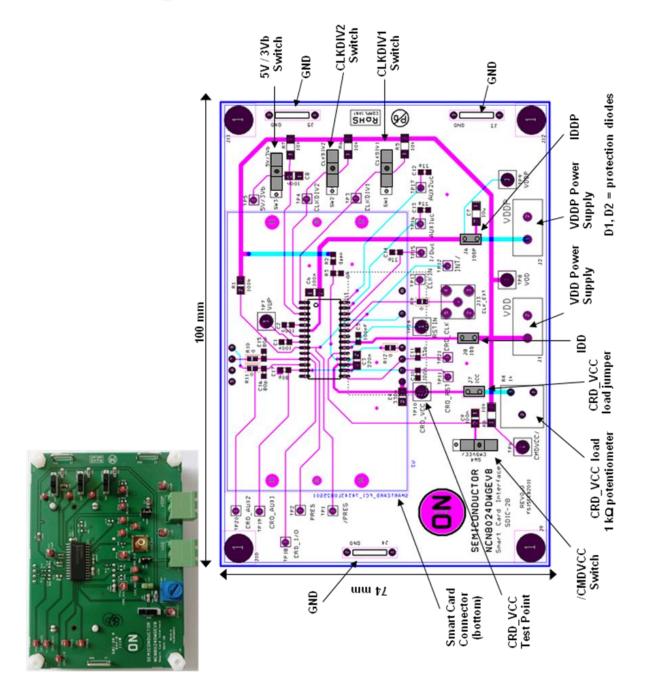


Figure 2: SOIC-28 Board Description (equivalent for TSSOP-28)