



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 F_{clk})
- Set 5V/3Vbar into a 5V position
- As a precaution, turn the 1 k Ω potentiometer to obtain a resistor output value of 1 k Ω , 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 measurements, set the board as follows:

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

