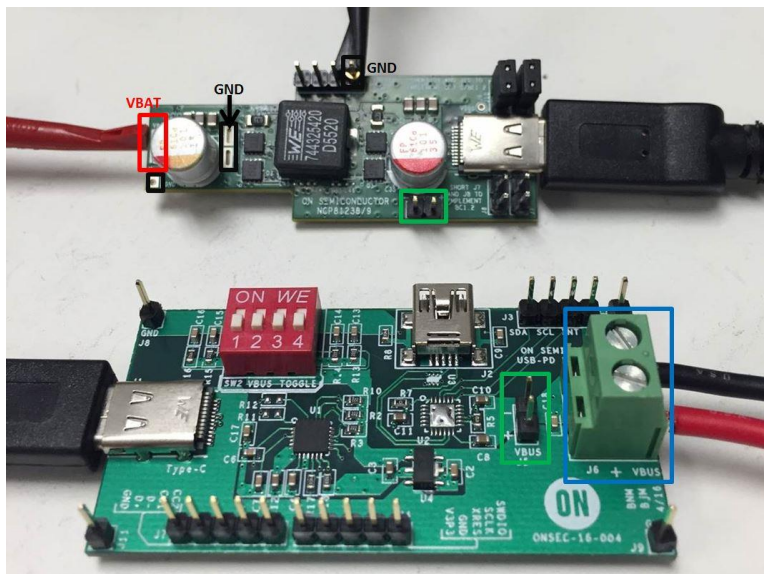


Test Procedure for the NCP81239REFGEVB Evaluation Board

Required Equipment:

- NCP81239LOADGEVK (USB-PD Load Board and Type-C Cable)
- Power Supply capable of supplying 10A
- Electronic Load
- Multimeter or Oscilloscope

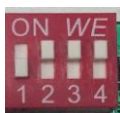
1. Apply 5-24V (Typical 14V) to **VBAT**.




- a.
- b. Plug Type-C cable into Charger board and Load board.
- c. External load can be applied at the **output connector**.
- d. VBUS can be observed using the **VBUS sense headers** on the charger or load board.

2. Once plugged in and powered; VBUS will go to 5V, then re-negotiate VBUS voltage depending on position of dip switches.

- i. Dip switch Pos 1 should always be LOW. Pos 2, 3, 4 will control VBUS voltage.

1.  = 000 : VBUS = 5V

2.  = 111 : VBUS = 20V

- ii. The following are the bit sequences for each output voltage:

1. 000 = 5V



- 2. 001 = 7V
- 3. 010 = 8V
- 4. 011 = 9V
- 5. 100 = 12V
- 6. 101 = 15V
- 7. 110 = Undefined
- 8. 111 = 20V

Expected Results:

Vin	Vout	Iout	Iin
12 V	5 V	0 A	0.042 A
12 V	5 V	3 A	1.447 A
12 V	7 V	0 A	0.043 A
12 V	7 V	3 A	1.956 A
12 V	8 V	0 A	0.046 A
12 V	8 V	3 A	2.216 A
12 V	9 V	0 A	0.044 A
12 V	9 V	3 A	2.468 A
12 V	12 V	0 A	0.053 A
12 V	12 V	3 A	3.239 A
12 V	15 V	0 A	0.062 A
12 V	15 V	3 A	4.037 A
12 V	20 V	0 A	0.082 A
12 V	20 V	3 A	5.403 A