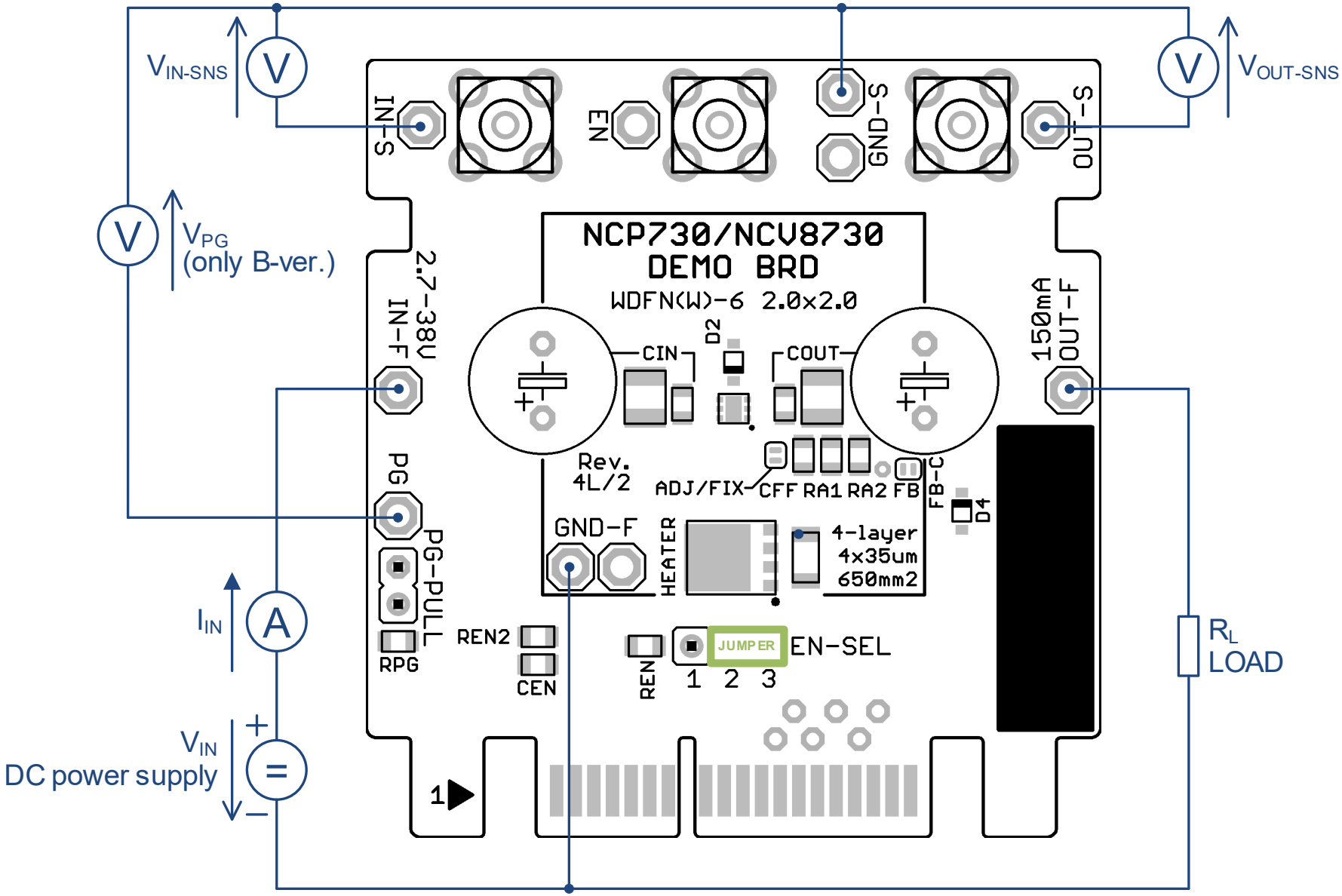
NCV8730BMTWADJTBGEVB (DFN-6) Evaluation Board – Test procedure



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Output voltage accuracy test:

1) Apply no load.
2) Apply input voltage $V_{IN} = V_{OUT-NOM} + 1V$ and $V_{IN} >= 2.7V$.
3) Measure output voltage $V_{OUT-SNS}$.

Notes:

- V_{IN} and I_{LOAD} could be changed in ranges specified in datasheet to measure line and load regulations.

Quiescent current test:

1) Apply no load.
2) Apply input voltage $V_{IN} = V_{OUT-NOM} + 1V$ and $V_{IN} >= 2.7V$.
3) Measure input current I_{IN} (note that I_Q is I_{IN} at no load).

Notes:

- V_{IN} could be changed in range specified in datasheet.
- I_{LOAD} must be zero at this test to measure I_Q.
- At ADJ device version the current through R_1/R_2 resistor divider is added to quiescent current of the LDO. The value of I_{R1R2} could be computed as $I_{R1R2} = V_{OUT} / (R_1 + R_2)$ and then could be subtracted from measured input current I_{IN} to obtain LDO's quiescent current $I_Q = I_{IN} – I_{R1R2}$.

Dropout voltage test:

1) Apply desired load current (for example 150mA).
2) Apply input voltage $V_{IN} = V_{OUT-NOM} + 1V$ and $V_{IN} >= 2.7V$.
3) Decrease input voltage (V_{IN}) until measured output voltage ($V_{OUT-SNS}$) falls out of regulation to level $V_{OUT-SNS} = V_{OUT-NOM} – 100mV$.
4) Compute dropout voltage $V_{DO} = V_{IN-SNS} - V_{OUT-SNS}$.

Notes:

- During this testing the LDO is heated up by dissipated power $P_{DIS} = (V_{IN} – V_{OUT}) * I_{OUT}$ so take in mind that measured dropout voltage could be higher than a typical value specified at $T_J = 25degC$.