



## Test Procedure for the NCP729FC26GEVB Evaluation Board

### Test Setup 1:

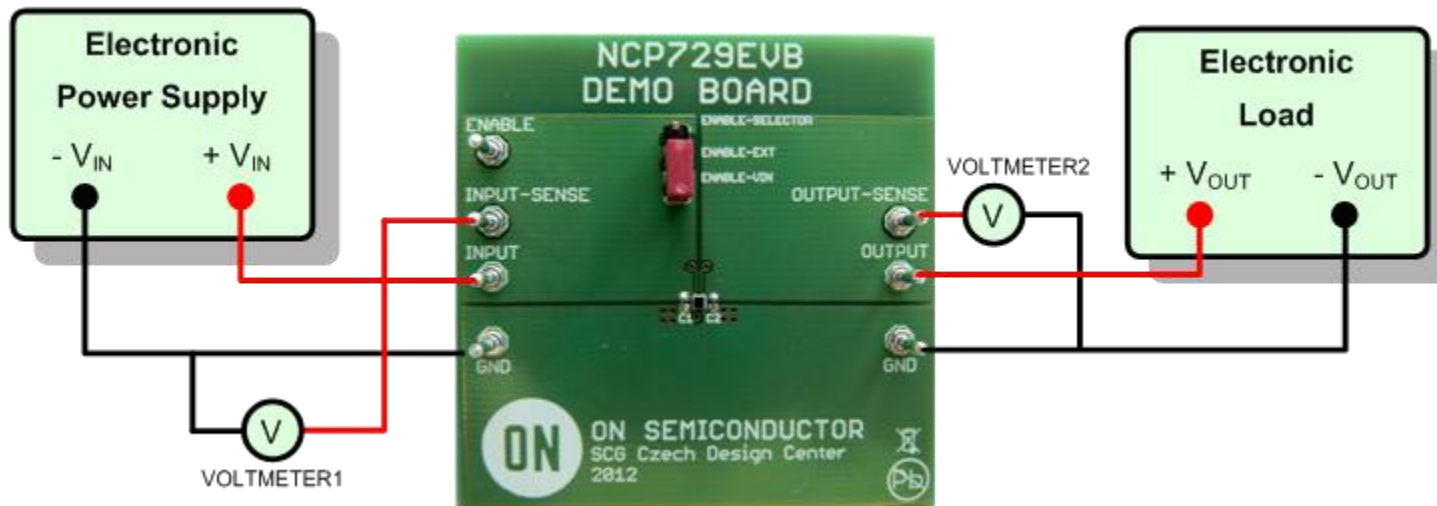


Figure 1. Test setup for the measurements of basic regulation characteristics

### Required Equipment:

- 2 x Voltmeters
- 2 x Ampere meters
- DC Power Supply – Max. 5.5V
- Electronic Load



### Test Procedure for the Measurement of Line Regulation parameter using Test Setup 1:

1. Connect the test setup as shown on Figure 1,
2. Set the electronic load for the required load current e.g.  $I_{OUT} = 10\text{mA}$ ,
3. Apply the required minimum input voltage e.g.  $V_{IN\_MIN} = V_{OUT\_NOM} + 0.3\text{V}^{(1)}$ ,
4. Note the output voltage reading  $V_{OUT1}$  indicated by VOTLMETER2,
5. Apply the required maximum input voltage e.g.  $V_{IN\_MAX} = V_{OUT\_NOM} + 1.3\text{V}^{(1)}$ ,
6. Note the output voltage reading  $V_{OUT2}$  indicated by VOTLMETER2,
7. Calculate the Line Regulation parameter as:

$$\text{Reg}_{\text{LINE}} = (V_{OUT2} - V_{OUT1}) / (V_{IN\_MAX} - V_{IN\_MIN}) \text{ [V/V]}$$

8. Turn off the electronic load. Turn off the input power supply,
9. End of the test.

### Test Procedure for the Measurement of Load Regulation parameter using Test Setup 1:

1. Connect the test setup as shown on Figure 1,
2. Set the electronic load for the required minimum output current e.g.  $I_{OUT\_MIN} = 1\text{mA}$ ,
3. Apply the desired input voltage e.g.  $V_{IN} = V_{OUT\_NOM} + 0.3\text{V}^{(1)}$ ,
4. Note the output voltage reading  $V_{OUT1}$  indicated by VOTLMETER2,
5. Set the electronic load for the required maximum output current e.g.  $I_{OUT\_MAX} = 150\text{mA}$ ,
6. Note the output voltage reading  $V_{OUT2}$  indicated by VOTLMETER2,
7. Calculate the Load Regulation parameter as:

$$\text{Reg}_{\text{LOAD}} = (V_{OUT2} - V_{OUT1}) / (I_{OUT\_MAX} - I_{OUT\_MIN}) \text{ [V/A]}$$

8. Turn off the electronic load. Turn off the input power supply,
9. End of the test.

(1)  $V_{OUT\_NOM}$  is the nominal output voltage level of the regulator. NCP729 operating  $V_{IN}$  must be in the range  $2.0\text{V} \leq V_{IN} \leq 5.5\text{V}$