



## Test Procedure for the NCP729FC28GEVB Evaluation Board

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### Test Setup 1:

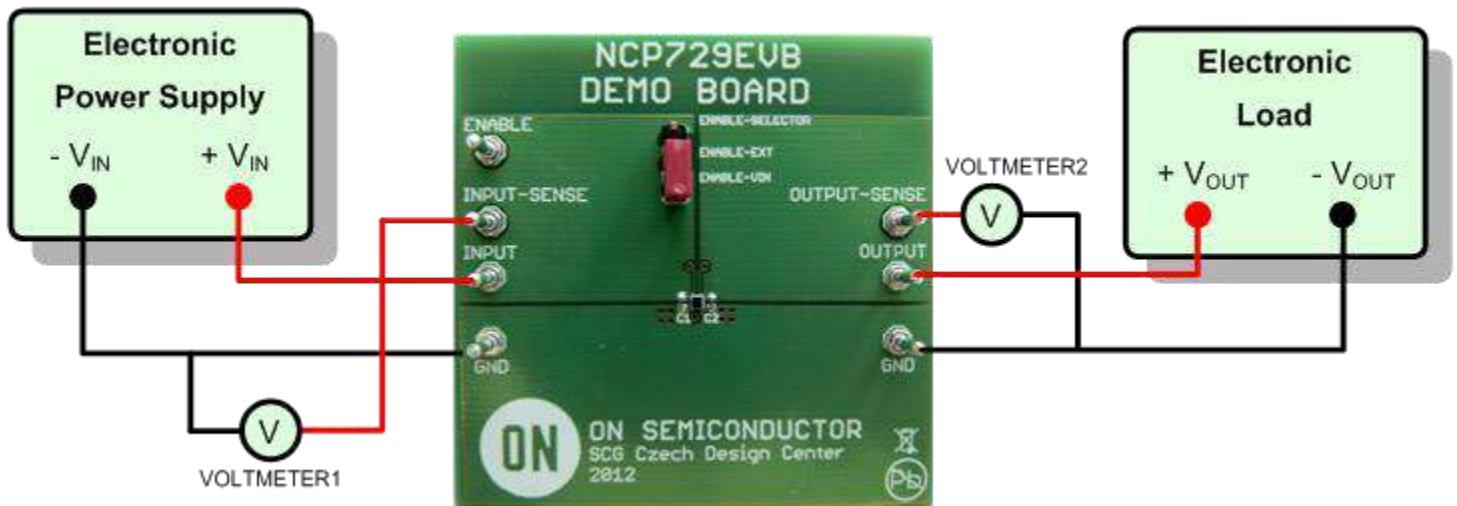


Figure 1. Test setup for the measurements of basic regulation characteristics

### 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.  $V_{IN\_MIN} = V_{OUT\_NOM} + 0.3\text{V}$  <sup>(1)</sup>



- Note the output voltage reading  $V_{OUT1}$  indicated by VOTLMETER2
- Apply the required maximum input voltage e.g.  $V_{IN\_MAX} = V_{OUT\_NOM} + 1.3V$ <sup>(1)</sup>
- Note the output voltage reading  $V_{OUT2}$  indicated by VOTLMETER2,
- Calculate the Line Regulation parameter as:  
$$Reg_{LINE} = (V_{OUT2} - V_{OUT1}) / (V_{IN\_MAX} - V_{IN\_MIN}) [V/V]$$
- Turn off the electronic load. Turn off the input power supply
- End of the test

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

- Connect the test setup as shown on Figure 1
- Set the electronic load for the required minimum output current e.g.  $I_{OUT\_MIN} = 1mA$
- Apply the desired input voltage e.g.  $V_{IN} = V_{OUT\_NOM} + 0.3V$ <sup>(1)</sup>
- Note the output voltage reading  $V_{OUT1}$  indicated by VOTLMETER2
- Set the electronic load for the required maximum output current e.g.  $I_{OUT\_MAX} = 150mA$
- Note the output voltage reading  $V_{OUT2}$  indicated by VOTLMETER2
- Calculate the Load Regulation parameter as:  
$$Reg_{LOAD} = (V_{OUT2} - V_{OUT1}) / (I_{OUT\_MAX} - I_{OUT\_MIN}) [V/A]$$
- Turn off the electronic load. Turn off the input power supply
- 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  $2.0V \leq V_{IN} \leq 5.5V$