Test Procedure for the NCP729FC26GEVB Evaluation Board

Test Setup 1:

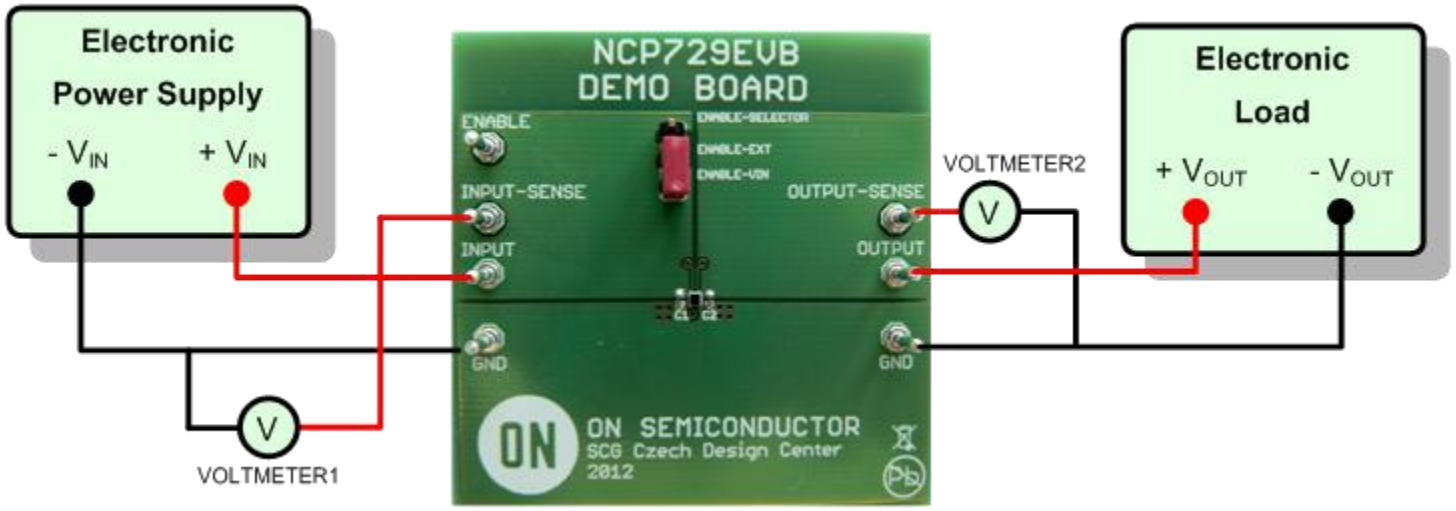

Figure 1. Test setup for the measurements of basic regulation characteristics

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} = 10mA,
3. Apply the required minimum input voltage e.g. $V_{IN\_MIN} = V_{OUT\_NOM}$ + 0.3V (1),
4. Note the output voltage reading V_{OUT1} indicated by VOTLMETER2,
5. Apply the required maximum input voltage e.g. $V_{IN\_MAX} = V_{OUT\_NOM}$ + 1.3V (1),
6. Note the output voltage reading V_{OUT2} indicated by VOTLMETER2,
7. Calculate the Line Regulation parameter as:

   $Reg_{LINE} = (V_{OUT2} - V_{OUT1}) / (V_{IN\_MAX} - V_{IN\_MIN})$ [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} = 1mA,
3. Apply the desired input voltage e.g. $V_{IN} = V_{OUT\_NOM}$ + 0.3V (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} = 150mA,
6. Note the output voltage reading V_{OUT2} indicated by VOTLMETER2,
7. Calculate the Load Regulation parameter as:

   $Reg_{LOAD} = (V_{OUT2} - V_{OUT1}) / (I_{OUT\_MAX} - I_{OUT\_MIN})$ [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 $2.0V \leq V_{IN} \leq 5.5V$