Test Procedure for the NCP51511SYNCBUCKGEVB Evaluation Board

Test Setup
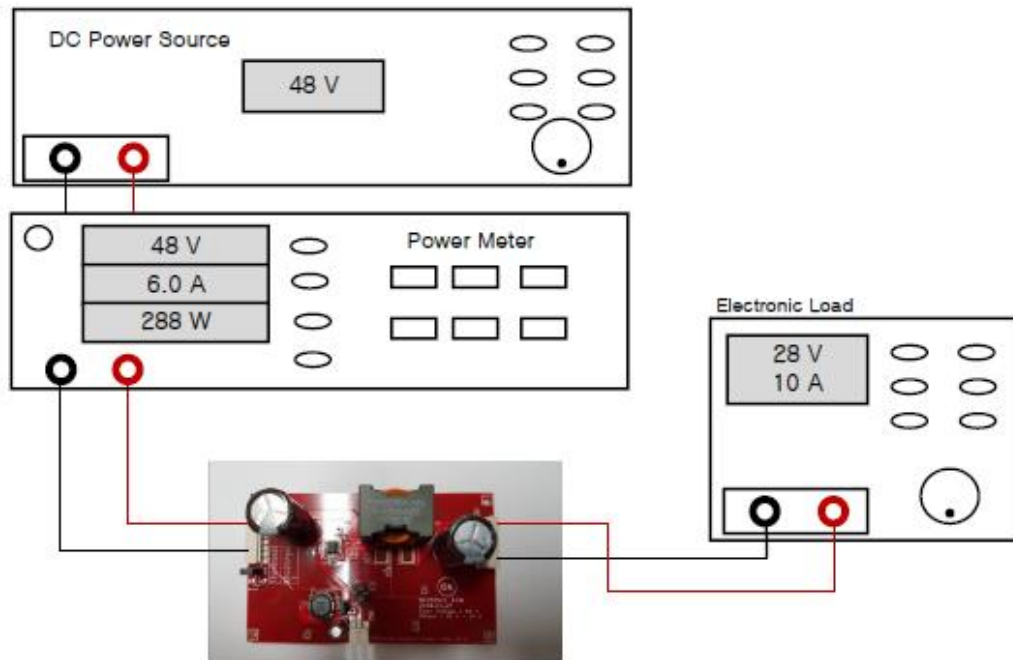

Figure 1. NCV51511 Test Setup

Table 1. **Test Equipment**

Equipment	Comment
ES 2000s DC Power Source (37 ~ 60 VIN)	Maximum power capability of DC power source should be over than 400 W.
WT310E Digital Power Meter	For measurement of input voltage/current and power.
PLZ1004WH Variable Electronic Load	Output load capability should be over than 300 W.
KEITHLEY 2002 Multimeter Digital Multimeter	For check VCC voltage.

Test Procedure

1. All of JP (JP1, JP2, JP3, JP4) should be connected on the board.
2. Connect the DC source to the input terminal J1.
3. Connect a variable electronic load to the output terminal J2, the PCB marked Vout, for the positive output, and GND for the return.
4. Turn on the DC source and set it to 48 VDC.
5. Verify that the Auxiliary power provides 10 V to the VCC. It is able to be checked at the TP 9 using multimeter.
6. Verify that the NCV51511_EVB provides 28 V to the load.
7. Verify that the output voltage is within the minimum and maximum values by the input and load condition. (Refer to table 2.)

Table 2. **Electrical Characteristics**(T_A=25℃, 38 V < V_{IN} < 58 , unless otherwise specified.)

Parameter	Test Conditions	Min	Typ	Max	Unit
Input Voltage	Positive DC input	37	48	60	V
Input Voltage UVLO		-	36	-	V
AUX output voltage		-	10.6	-	V
Output voltage	No Load Condition	-	28.8	-	V
	Full Load Condition	-	28.5	-	V
Over current Threshold		-	-	13	A
Soft Start Time		-	20	-	ms
Switching Frequency		190	200	210	kHz
System Efficiency	50% Load @ 48 V	-	97.2	-	%
	100% Load @ 48 V	-	97.0	-	%

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