



Test Procedure for the NCV7691RCLV1GEVB

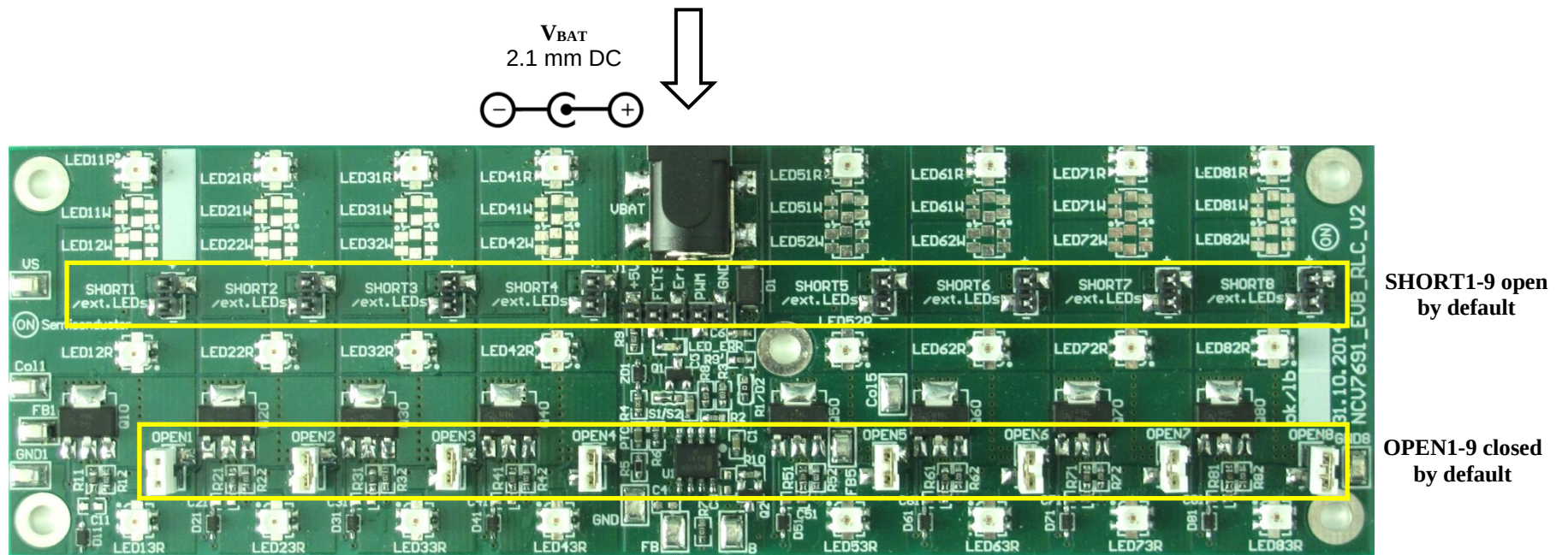


Figure 1: Test Setup Configuration

Initial setup

1. Add jumpers OPEN1, OPEN2, ... OPEN8
2. Remove jumpers SHORT1, SHORT2, ... SHORT8
3. Connect strap S1, remove strap S2

Required Equipment

- Bench Power Supply with Ampermeter
- NCV7691RCLV1GEVB Evaluation Board V2

Test procedure Step 1 (Current regulation):

4. Connect the setup as shown above;
5. Apply a supply voltage, sweep V_{BAT} from 7 V to 18 V
6. Check LEDxxR or LEDxxW regulation
7. Check LED_ERR
8. Check I_{BAT} .
9. Check FLTS (J1, pin4)

Table 1: Desired Results

LEDxxR or LEDxxW all on with constant brightness
LED_ERR = off
$I_{BAT} \sim 800 \text{ mA}$ (Rx1 = 1R5) @ $V_{BAT} = 7 - 18 \text{ V}$
FLTS = LOW

Test procedure Step 2 (PWM):

1. Apply a supply voltage, $V_{BAT} = 12\text{ V}$
2. Toggle PWM (J1, pin 2) to GND
3. Check LEDxxR or LEDxxW states

Table 2: Desired Results

LEDxxR or LEDxxW off when PWM is shorted to GND

Test procedure Step 3 (LED Short):

1. Apply a supply voltage, $V_{BAT} = 12\text{ V}$
2. Short SHORT1 jumper terminals
3. Remove the short
4. Check LEDxxR or LEDxxW states
5. Check LED_ERR state
6. Check I_{BAT}
7. Check FLTS (J1, pin4)
8. Disconnect V_{BAT}

Table 3: Desired Results

LEDxxR or LEDxxW all off
LED_ERR = on
$I_{BAT} < 8\text{ mA}$
FLTS = HIGH

Test procedure Step 4 (LED Open):

1. Apply a supply voltage, $V_{BAT} = 12\text{ V}$
2. Open OPEN1 jumper terminal
3. Close the terminal again
4. Check LEDxxR or LEDxxW states
5. Check LED_ERR state
6. Check I_{BAT}
7. Check FLTS (J1, pin 4)
8. Disconnect V_{BAT}

Table 4: Desired Results

LEDxxR or LEDxxW all off
LED_ERR = on
$I_{BAT} < 8\text{ mA}$
FLTS = HIGH

DC Characteristics

	MIN	TYP	MAX
FLTS LOW	0		1
FLTS HIGH	4		6