ON Semiconductor®

Test Procedure for the NCV7692DRLV1GEVB Evaluation Board

Initial setup:

1. Connect jumper OPEN

Required Equipment:

- Bench power supply with A-meter
- Multimeter
- NCV7692DRLV1GEVB board

Test procedure (current regulation)

2. Connect setup as shown above
3. Apply 14V using VBAT jack connector.
4. The ramp up of the VBAT input supply voltage should be faster than Open Load blanking time because the V_F of the LEDs is higher than Open Load detection threshold.
5. If the LEDs are not shining, then the device detected Open Load. Please repeat step 3 with faster ramp-up.
6. The current consumption of the board is 550mA and it is decreasing with temperature.
7. Voltage on the FB pin should be ~163mV, Voltage on the NTC pin should be 1.63V
8. If the PWM pin is tight to GND, then driver will turn OFF, if the PWM is released, the driver should be reactivated (the PWM toggle can be used in case of slow ramp-up when Open Load is detected)

Test procedure (Short of the LEDs)

1. Apply 14V on the supply connector.
2. Make sure that application is running.
3. Connect the SHORT jumper
4. The LED string is turned off and FLTS pin should report an error.
5. After removing a fault, the device can be reset to the normal mode either by toggling with PWM pin, or with power reset sequence.

Test procedure (Open Load detection)

1. Apply 14V on the supply connector.
2. Make sure that application is running.
3. Disconnect the OPEN jumper.
4. The LED string is turned OFF, the current consumption is decreased to 8 mA
5. FLTS pin goes from 0V to 5V and keep fault reporting
6. After removing a fault, the device can be reset to the normal mode either by toggling with PWM pin, or with power reset sequence.