



Test Procedure for the CAT4238 Evaluation Board

1. Jumper Configuration

- 1.1. Verify that jumper J1 is shunted in the upper position (pin 1 and 2).
- 1.2. Verify that jumpers J2 to J4 are open.
- 1.3. Set the cursor of potentiometer R2 to the mid-scale position.

2. Power Supply

- 2.1. Connect an external 5V DC power supply between the test points T1 (VIN) and T2 (GND). Connect the positive terminal of the supply to pin T1 and the negative terminal to pin T2. There is no protection against reverse voltage on the T1 and T2 terminals.

3. Test Procedure:

- 3.1. Connect an LED string consisting of 10 white LEDs in series to the CAT4238. Connect the anode end of the string to test point T7 (VOUT). Connect the cathode end of the LED string to test point T10 (LED).
- 3.2. Turn on the external power supply. The 10 white LEDs should light up.
- 3.3. Rotate the cursor on potentiometer R2. The LEDs' brightness will change.
- 3.4. Remove jumper J1 to make the CAT4238 enter shutdown mode. Reinstall jumper J1 in the same position.
- 3.5. Turn off the external power supply.
- 3.6. Disconnect the LED string at the cathode end and install an ammeter between the cathode and test point T10 (LED) to measure the LED current.
- 3.7. Turn on the external power supply.
- 3.8. Measure the voltage at test points T5 (FB), T7 (VOUT), and T9 (SW) with respect to GND using a voltmeter.
- 3.9. Verify the internal switching frequency ($F_{SW} \sim 1.0\text{MHz}$) using an oscilloscope probe connected between test points T9 (SW) and T8 (GND).
- 3.10. Remove the shunt from jumper J1. The CAT4238 enters shutdown mode.
- 3.11. Turn off the external power supply.