ON Semiconductor

Test Procedure for the CAT4139AGEVB Evaluation Board

Test Procedure:

1. Initial Setup and Jumper Configuration

1.1. Verify that jumper K1 is open.
1.2. Connect a string of 6 LED's to the CAT4139. Connect the anode end of the LED's to test point T7 (VOUT). Connect the cathode end of the LED's to test point T6 (LED). The LED's should have a 350mA or greater current rating.
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 'VIN' and 'GND'. Connect the positive terminal of the supply to pin VIN and the negative terminal to pin GND. There is no protection against reverse voltage on the VIN and GND terminals.

2.2. Connect test point T8 (VL) to test point T1 (VIN) using a wire.

3. Test Procedure

3.1. Turn on the external power supply.

3.2. Install a shunt on jumper K1. The CAT4139 will be enabled and the LED's should light up.

3.3. Rotate the cursor on potentiometer R2. The LED's brightness will change.

3.3. Verify the internal switching frequency (F_{SW} ~ 1.0MHz - typically) using an oscilloscope probe connected between test points T5 (SW) and T4 (GND).

3.4. Remove the shunt from jumper K1. The CAT4139 will be disabled and the LED's should turn off.

3.5. Turn off the external power supply.