Snehil Rao

17BEE0282

Project Progress Report

In this part I researched about different IC to function the 7 segment display and finally come to conclusion to use **TLC7107** & **IC 7660** in this project.

Pinout and function of the ic are:

**PIN** **FUNCTION** **TABLE**

|  |  |  |  |
| --- | --- | --- | --- |
| **Pin** **Number** **(40-Pin** **PDIP)** **Normal** | **Pin** **No.** **(40-Pin** **PDIP)**  **Reverse** | **Symbol** | **Description** |
| 1 | (40) | V+ | Positive supply voltage. |
| 2 | (39) | D1 | Activates the D section of the units display. |
| 3 | (38) | C1 | Activates the C section of the units display. |
| 4 | (37) | B1 | Activates the B section of the units display. |
| 5 | (36) | A1 | Activates the A section of the units display. |
| 6 | (35) | F1 | Activates the F section of the units display. |
| 7 | (34) | G1 | Activates the G section of the units display. |
| 8 | (33) | E1 | Activates the E section of the units display. |
| 9 | (32) | D2 | Activates the D section of the tens display. |
| 10 | (31) | C2 | Activates the C section of the tens display. |
| 11 | (30) | B2 | Activates the B section of the tens display. |
| 12 | (29) | A2 | Activates the A section of the tens display. |
| 13 | (28) | F2 | Activates the F section of the tens display. |
| 14 | (27) | E2 | Activates the E section of the tens display. |
| 15 | (26) | D3 | Activates the D section of the hundreds display. |
| 16 | (25) | B3 | Activates the B section of the hundreds display. |
| 17 | (24) | F3 | Activates the F section of the hundreds display. |
| 18 | (23) | E3 | Activates the E section of the hundreds display. |
| 19 | (22) | AB4 | Activates both halves of the 1 in the thousands display. |
| 20 | (21) | POL | Activates the negative polarity display. |
| 21 | (20) | BP/GND | LCD Backplane drive output (TC7106A). Digital Ground (TC7107A). |
| 22 | (19) | G3 | Activates the G section of the hundreds display. |
| 23 | (18) | A3 | Activates the A section of the hundreds display. |
| 24 | (17) | C3 | Activates the C section of the hundreds display. |
| 25 | (16) | G2 | Activates the G section of the tens display. |
| 26 | (15) | V- | Negative power supply voltage. |
| 27 | (14) | VINT | Integrator output. Connection point for integration capacitor. See INTEGRATING CAPACITOR section for more details. |
| 28 | (13) | VBUFF | Integration resistor connection. Use a 47kΩresistor for a 200mV full scale range and a 47kΩresistor for 2V full scale range. |
| 29 | (12) | CAZ | The size of the auto-zero capacitor influences system noise. Use a 0.47F capacitor for 200mV full scale, and a 0.047F capacitor for 2V full scale. See Section 7.1 on Auto-Zero Capacitor for more details. |
| 30 | (11) | VIN- | The analog LOW input is connected to this pin. |
| 31 | (10) | VIN+ | The analog HIGH input signal is connected to this pin. |
| 32 | (9) | ANALOG COMMON | This pin is primarily used to set the Analog Common mode voltage for battery opera-tion or in systems where the input signal is referenced to the power supply. It also acts as a reference voltage source. See Section 8.3 on ANALOG COMMON for more details. |
| 33 | (8) | CREF- | See Pin 34. |
| 34 | (7) | CREF+ | A 0.1F capacitor is used in most applications. If a large Common mode voltage  exists (for example, the VIN- pin is not at  analog common), and a 200mV scale is used,  a 1F capacitor is recommended and will hold  the rollover error to 0.5 count. |
| 35 | (6) | VREF- | See Pin 36. |
|  |  |  |  |
| 36 | (5) | VREF+ | **The analog input required to generate a full scale output (1999 counts). Place 100mV between Pins 35 and 36 for 199.9mV full scale. Place 1V between Pins 35 and 36 for 2V full scale. See paragraph on Reference Voltage.** |
| 37 | (4) | TEST | Lamp test. When pulled HIGH (to V+) all segments will be turned on and the display should read -1888. It may also be used as a negative supply for externally generated decimal points. See paragraph under TEST for additional information. |
| 38 | (3) | OSC3 | See Pin 40. |
| 39 | (2) | OSC2 | See Pin 40. |
| 40 | (1) | OSC1 | Pins 40, 39, 38 make up the oscillator section. For a 48kHz clock (3 readings per section), connect Pin 40 to the junction of a 100kΩ resistor and a 100pF capacitor. The 100kΩ resistor is tied to Pin 39 and the 100pF capacitor is tied to Pin 38. |

