

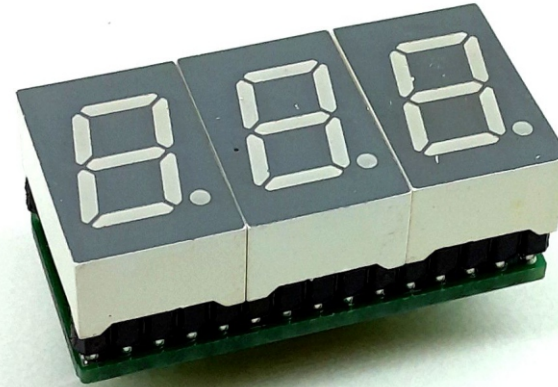
### 3 Digit Common Cathode 0.5" - 7 Segment Display Module (Multiplexed)

This is a 3 Digit 7-segment display project that contains 3 x Common Cathode displays, current limiting resistors on each LED segment, 3 x PNP Transistor on each common cathode for multiplexing etc. The project works with 5V TTL signals but can be optimized for 3.3V operations by reducing current limiting resistors value. A header connector is provided for easy interface to Arduino or other microcontrollers. All inputs are TTL 5V compatible.

#### Multiplexed display Info

[https://en.wikipedia.org/wiki/Multiplexed\\_display](https://en.wikipedia.org/wiki/Multiplexed_display)

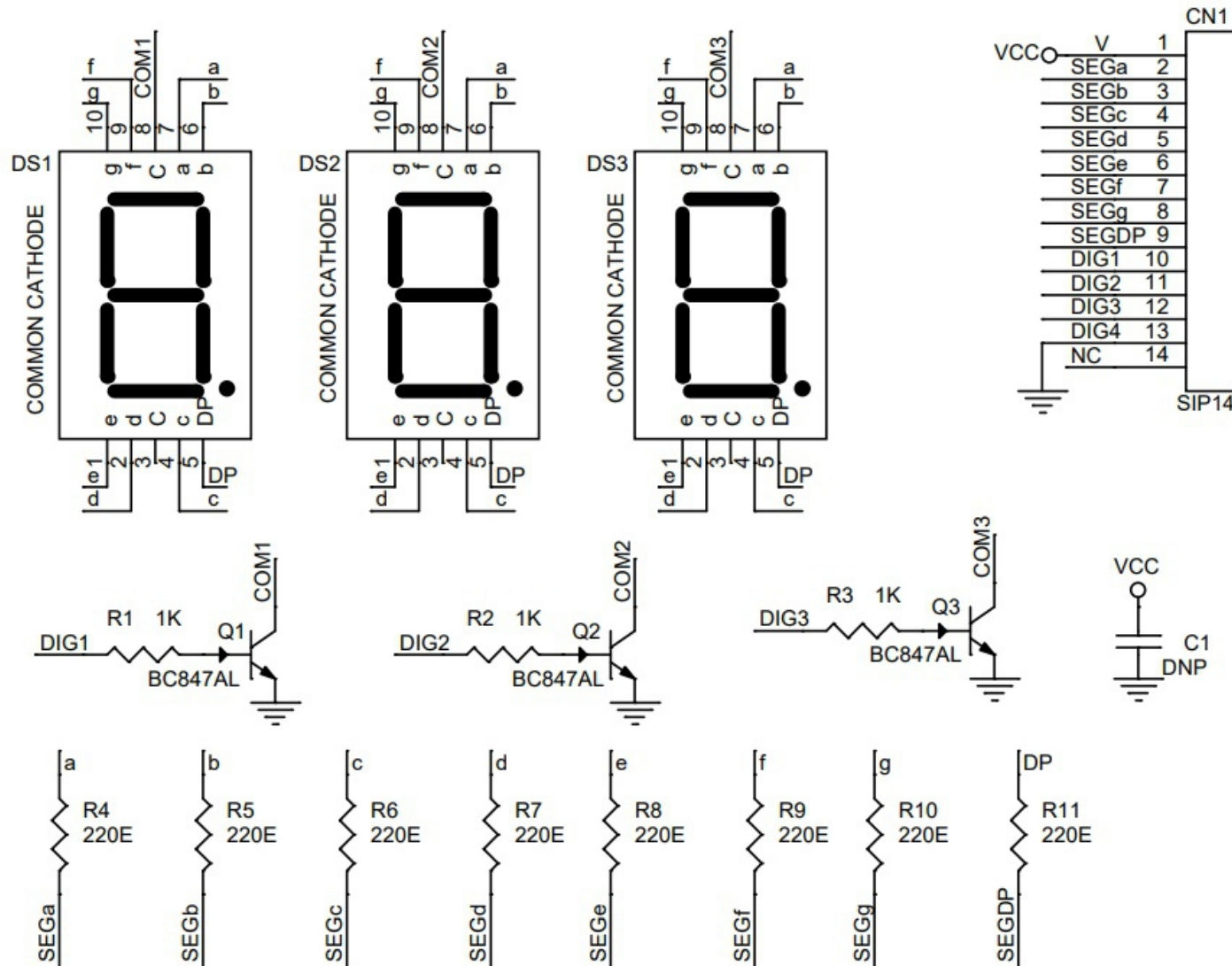
- PIN 1 NC (VCC-NO USE)
- PIN 2 SEGMENT A
- PIN 3 SEGMENT B
- PIN 4 SEGMENT C
- PIN 5 SEGMENT D
- PIN 6 SEGMENT E
- PIN 7 SEGMENT F
- PIN 8 SEGMENT G
- PIN 9 DP
- PIN 10 DISPLAY 1 CATHODE (BC847 BASE)
- PIN 11 DISPLAY 2 CATHODE (BC847 BASE)
- PIN 12 DISPLAY 3 CATHODE (BC847 BASE)
- PIN 13 GND
- PIN 14 NC



Arduino code is provided to test the board. The user will be able to create a 0 to 5V DC Voltmeter using this code. Upload the code to Arduino Uno, apply 0 to 5V to Analog Pin A0 to Measure the voltage. Refer Arduino pin configuration vs display below:

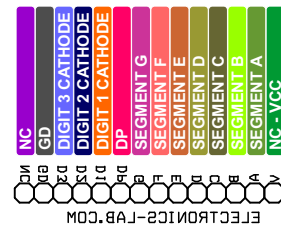
Digital Pin D12 = Display 1 Cathode  
Digital Pin D11 = Display 2 Cathode  
Digital Pin D10 = Display 3 Cathode  
Digital Pin D2 = Display Segment A  
Digital Pin D3 = Display Segment B  
Digital Pin D4 = Display Segment C  
Digital Pin D5 = Display Segment D  
Digital Pin D6 = Display Segment E  
Digital Pin D7 = Display Segment F  
Digital Pin D8 = Display Segment G  
Digital Pin D9 = Display Segment DP

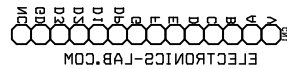
Analog Pin Input = A0 5V Meter



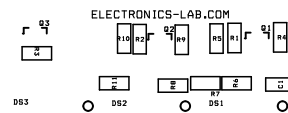


| BOM |       |                           |                              |              |          |                  |
|-----|-------|---------------------------|------------------------------|--------------|----------|------------------|
| NO  | QNTY. | REF.                      | DESC.                        | MANUFACTURER | SUPPLIER | SUPPLIER PART NO |
| 1   | 1     | CN1                       | 14 PIN MALE HEADER           | WURTH        |          | 732-5334-ND      |
| 2   | 1     | C1                        | DNP                          |              |          |                  |
| 3   | 3     | DS1,DS2,DS3               | COMMON CATHODE 0.5/0.56 INCH | KINGBRIGHT   |          | 754-1705-5-ND    |
| 4   | 3     | Q1,Q2,Q3                  | BC847AL                      | NEXPERIA     |          | 1727-2924-2-ND   |
| 5   | 3     | R1,R2,R3                  | 1K 5% SMD SIZE 0805          | MURATA/YAGEO |          |                  |
| 6   | 8     | R4,R5,R6,R7,R8,R9,R10,R11 | 220E 5% SMD SIZE 0805        | MURATA/YAGEO |          |                  |

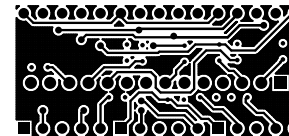




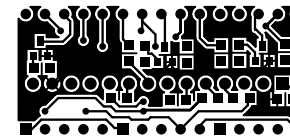
SILK SCREEN BOTTOM



SILK SCREEN TOP



BOTTOM LAYER



TOP LAYER

**PCB DIMENSIONS 38.42MM X 17.78MM**

