

The diagram shows a 4-bit LED driver circuit. A common VCC supply line at the top provides power to four BC547B transistors (Q1, Q2, Q3, Q4). Each transistor's emitter is connected to ground (pin 3). The base of each transistor is connected to a 10k resistor (R4, R5, R6, R7) which is in turn connected to an LED (L0, L1, L2, L3). The collector of each transistor is connected to a 220R resistor (R1, R2, R3, R8) which is connected to ground (pin 1). The LEDs are represented by blue symbols with labels L0, L1, L2, and L3. The transistors are labeled Q1, Q2, Q3, and Q4, all of type BC547B. The resistors are labeled R1 through R8 with their respective values: R4, R5, R6, R7 are 10k, and R1, R2, R3, R8 are 220R.

Ports

The diagram illustrates two ports, P1 and P2, and their connections to a circuit.

Port P1: A 2-pin port. Pin 1 is connected to VCC, and Pin 2 is connected to GND.

Port P2: An 8-pin port. The connections are as follows:

- Pin 1: SRDTA
- Pin 2: SRCLK
- Pin 3: LATCH
- Pin 4: (Marked with a green X, indicating it is not connected)
- Pin 5: L3
- Pin 6: L2
- Pin 7: L1
- Pin 8: L0

LED cathodes

The diagram illustrates 16 LED cathode connections arranged in a 4x4 grid. Each connection is represented by a blue trapezoidal LED symbol, a green line, and a red rectangular box containing the number '1'. The connections are labeled as follows:

- Row 1: C12, C13, C14, C15
- Row 2: C8, C9, C10, C11
- Row 3: C4, C5, C6, C7
- Row 4: C0, C1, C2, C3

Shift registers

The diagram shows two SN74HC595N shift registers, U1 and U2, connected to a 5V VCC and ground. Both registers have their QH' pins connected to ground. U1 is connected to inputs C1-C7 and outputs C0, SRDTA, LATCH, and SRCLK. U2 is connected to inputs C9-C15 and output C8. The QH pin of U2 is marked with a green 'X' and is not connected.

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