

Power Supply Circuit Schematic

12V Input Section:

- VCC_12V input to U1 (LTC3622-2 DFN) at pins 13 (VIN_1) and 9 (VIN2).
- Capacitors C2 (10uF, 25V) and C3 (10uF, 25V) connected to ground.

5V Section:

- VCC_5V input to U1 at pin 14 (PGOOD1) and U2 at pin 1 (IN).
- Capacitors C4 (22uF, 16V), C5 (22pF), and C15 (22pF) connected to ground.

3V3 Section:

- VCC_3V3 input to U1 at pin 15 (GND) and U2 at pin 2 (NC).
- Capacitors C6 (22pF), C7 (22uF, 16V), and C16 (22pF) connected to ground.

DC-DC Converters:

- U1 (LTC3622-2 DFN):**
 - Mode: INTVCC, ILIM, PHASE.
 - Output: 3V3 (pin 11) and 5V (pin 5).
 - Inductors: L1 (4.7uH), L2 (3.3uH).
 - Resistors: R3 (187k), R4 (115k), R5 (25k5).
- U2 (LDO_LDLN15PU18R 1.8V):**
 - Output: 1.8V (pin 6).
 - Capacitors: C12 (1uF), C13 (22pF).

LEDs:

- 3V3 LED Strip (D11, D12):** Connected to 3V3 output of U1.
- 5V LED Strip (D13, D14):** Connected to 5V output of U1.
- 3V3 LED Strip (D15, D16):** Connected to 1.8V output of U2.

Other Components:

- Resistor R1 (10k) connected to INTVCC.
- Resistor R2 (10k) connected to INTVCC.
- Resistor R6 (25k5) connected to ground.
- Resistor R7 (10k) connected to ground.
- Resistor R8 (10k) connected to ground.
- Resistor R9 (10k) connected to ground.
- Resistor R10 (10k) connected to ground.
- Resistor R11 (10k) connected to ground.
- Resistor R12 (10k) connected to ground.
- Resistor R13 (10k) connected to ground.
- Resistor R14 (10k) connected to ground.
- Resistor R15 (10k) connected to ground.
- Resistor R16 (10k) connected to ground.
- Resistor R17 (10k) connected to ground.
- Resistor R18 (10k) connected to ground.
- Resistor R19 (10k) connected to ground.
- Resistor R20 (10k) connected to ground.
- Resistor R21 (10k) connected to ground.
- Resistor R22 (10k) connected to ground.
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- Resistor R24 (10k) connected to ground.
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- Resistor R96 (10k) connected to ground.
- Resistor R97 (10k) connected to ground.
- Resistor R98 (10k) connected to ground.
- Resistor R99 (10k) connected to ground.
- Resistor R100 (10k) connected to ground.

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The diagram illustrates a motor speed control circuit. It features two MOSFETs, Q1A and Q2B, both IRF9389, which serve as the main switching transistors. The gates of these MOSFETs are driven by a pair of complementary MOSFETs, Q1B and Q2A, also IRF9389, configured as a push-pull stage. This push-pull stage is controlled by a potentiometer (POT2E) connected between pins 19 and 20. The potentiometer's wiper (pin 1) is connected to the gate of Q1A, and its other end (pin 2) is connected to the gate of Q2B. The source of Q1A is connected to the positive supply rail (VCC = 5V), and its drain is connected to the motor's positive terminal (pin 1). The source of Q2B is connected to the negative supply rail (GND), and its drain is connected to the motor's negative terminal (pin 2). The motor is represented by a circle with 'M' and 'POT2E' inside. The circuit includes various passive components: resistors R1 through R15 and capacitors C1 through C11. The motor is connected to a 5V supply and ground. The potentiometer is connected to the motor's positive terminal (pin 1) and the motor's negative terminal (pin 2). The potentiometer's wiper (pin 1) is connected to the gate of Q1A, and its other end (pin 2) is connected to the gate of Q2B. The potentiometer is also connected to the motor's positive terminal (pin 1) and the motor's negative terminal (pin 2). The potentiometer is also connected to the motor's positive terminal (pin 1) and the motor's negative terminal (pin 2).

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