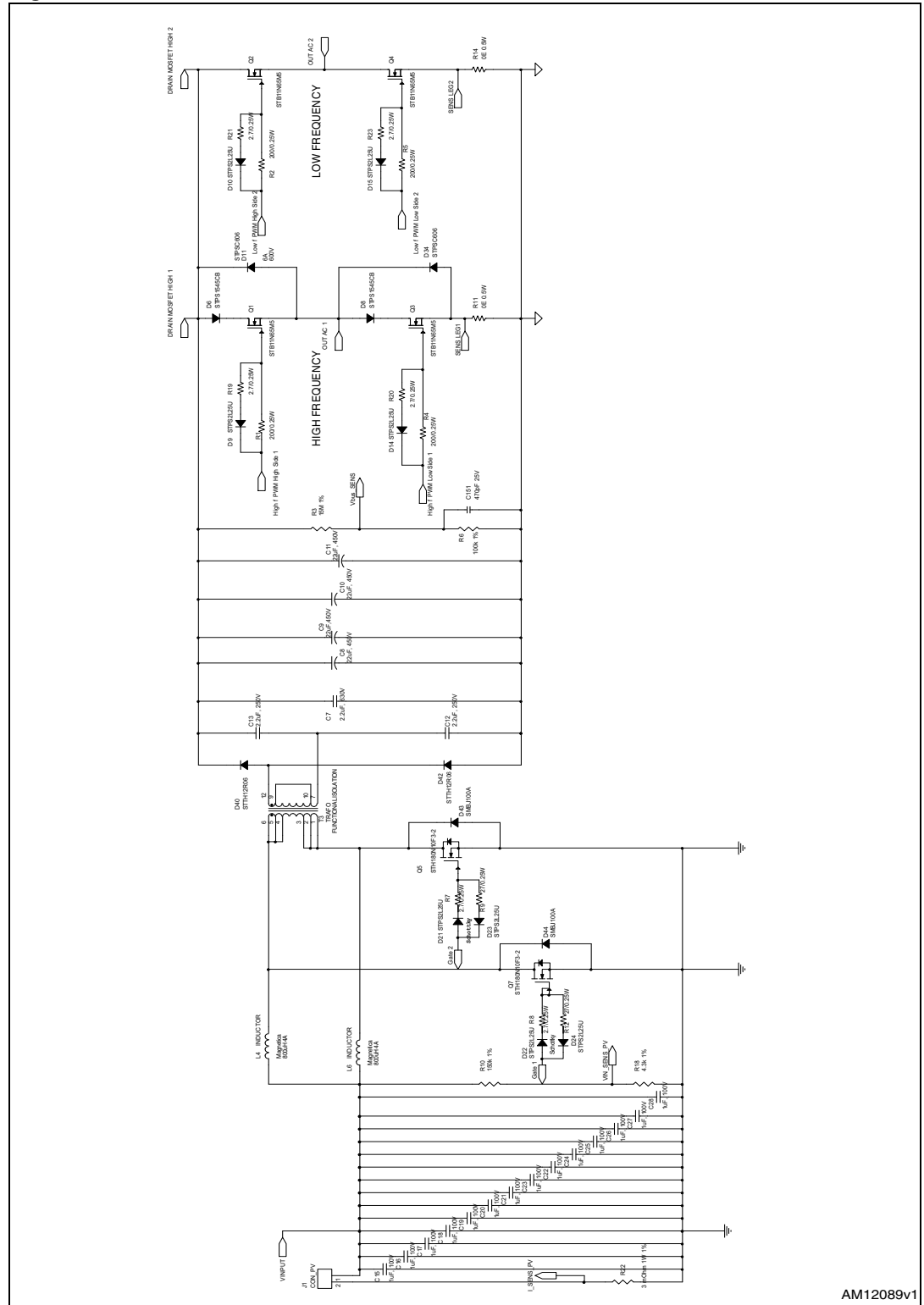


Figure 1. Isolated interleaved boost converter



AM10193V1

Figure 5. V-bus sensing

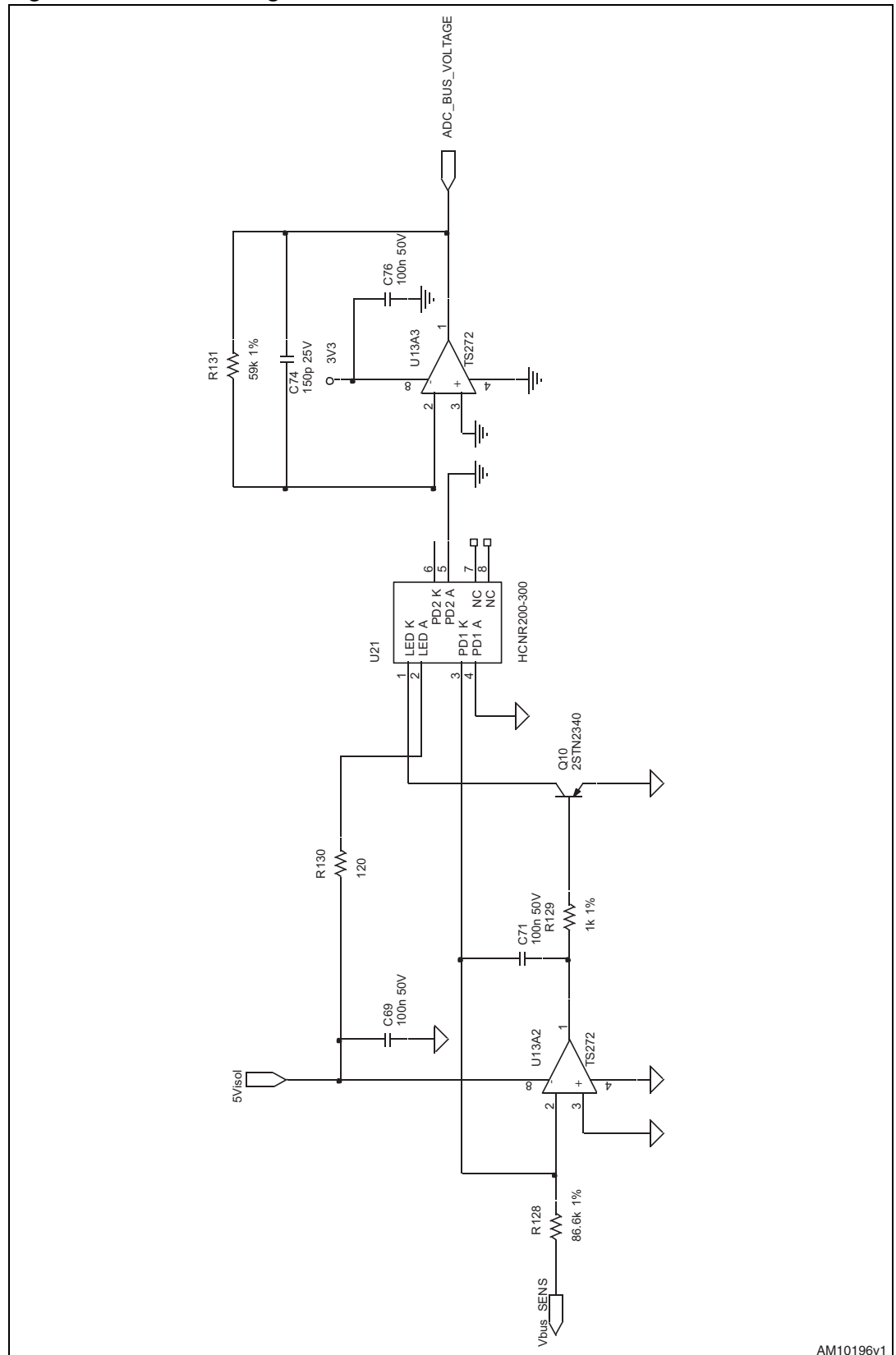


Figure 6. 5 V isolated

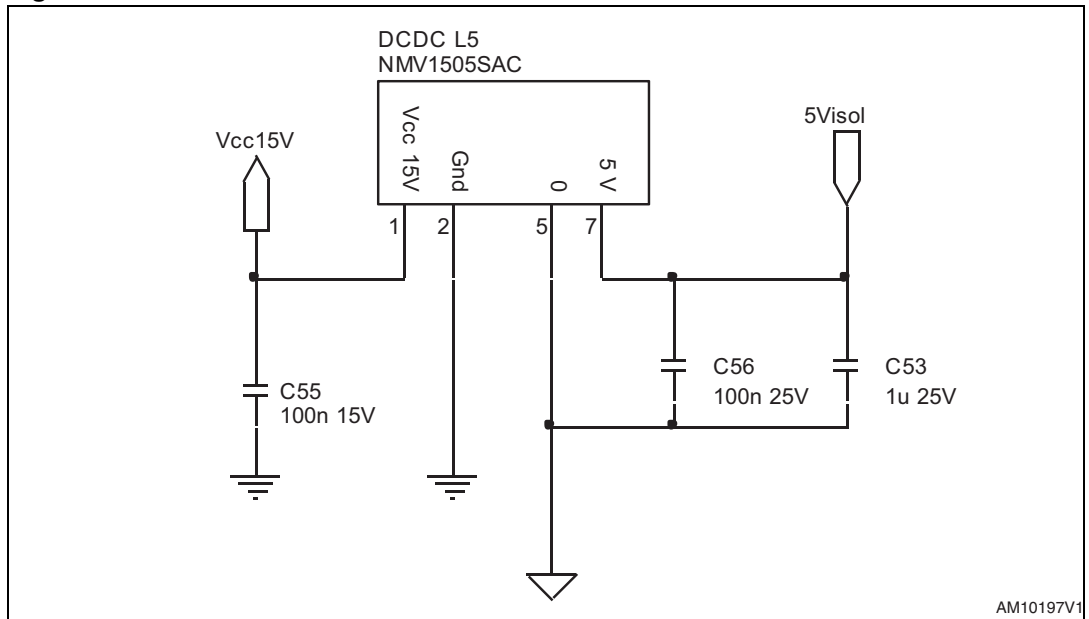


Figure 7. PV voltage sensing section

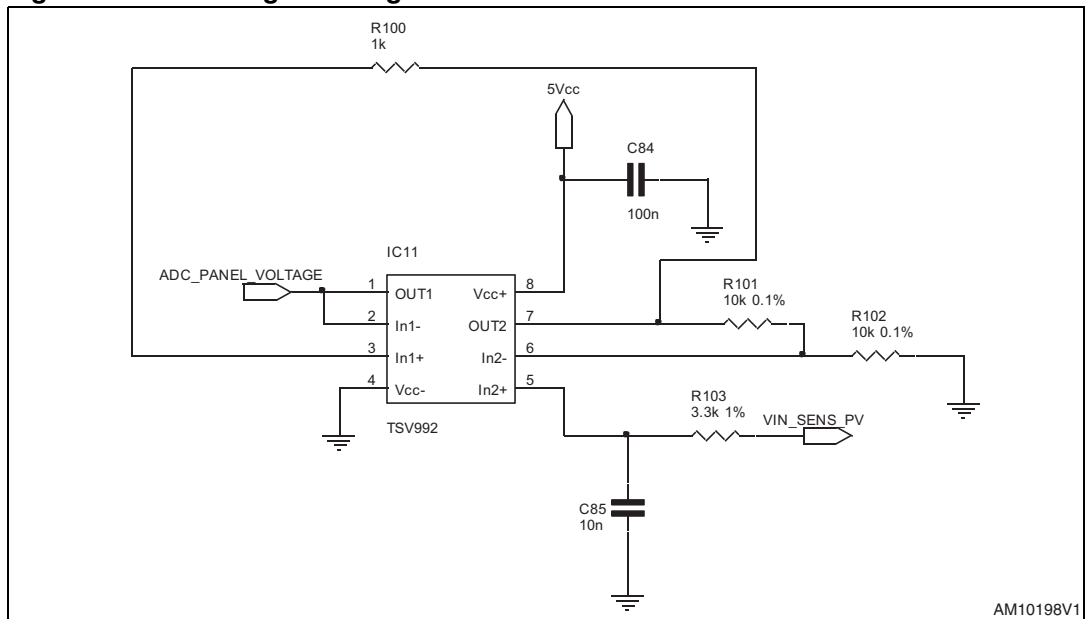
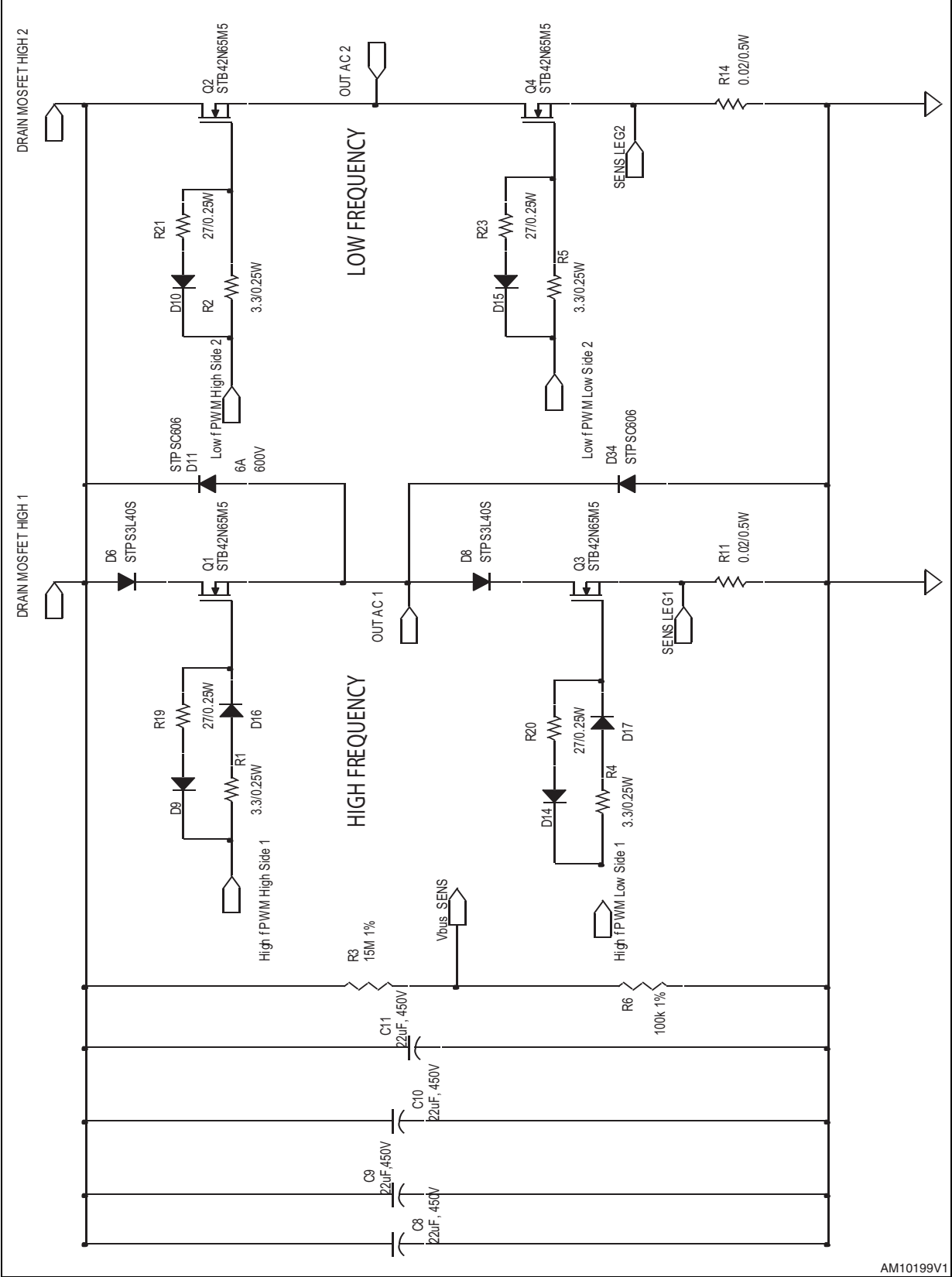


Figure 8. DC/AC topology: mixed-frequency inverter



[illegible]

Figure 10. Output current sensor

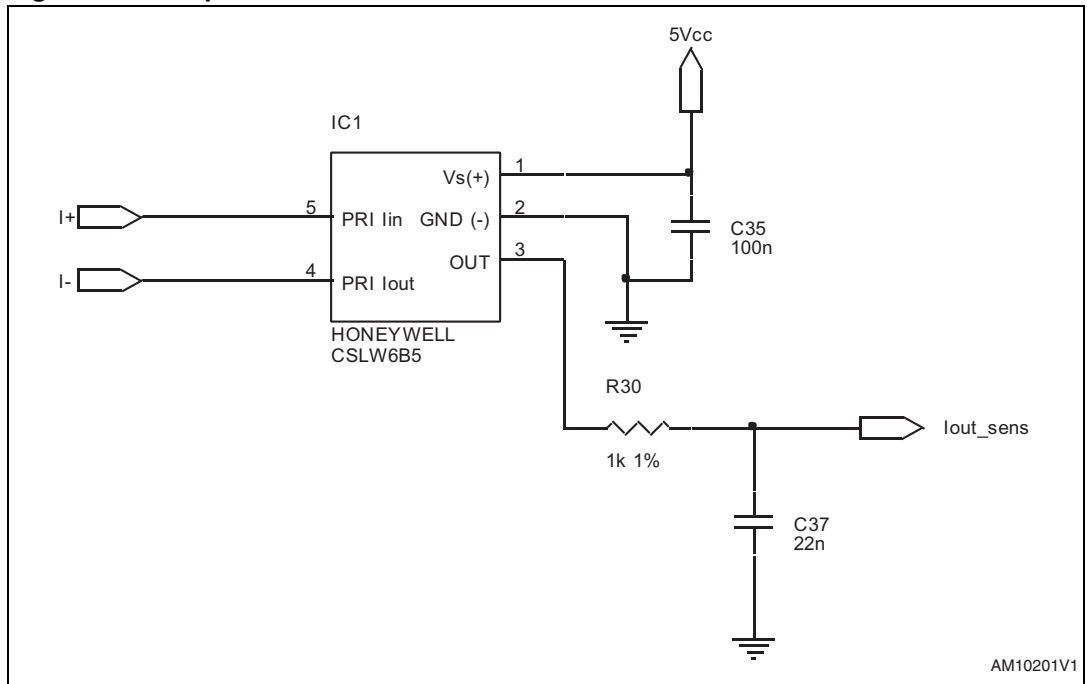
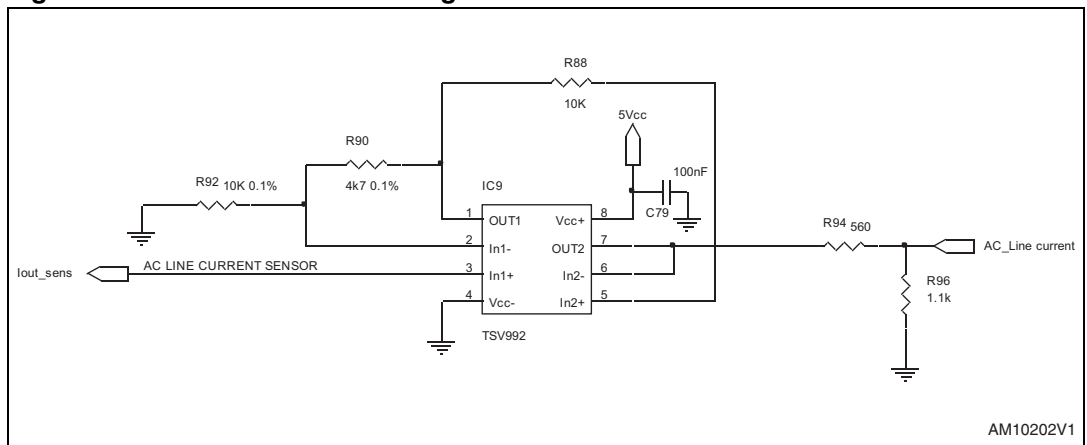


Figure 11. AC line current sensing



[illegible]

DC/AC Drive section

The schematic diagram illustrates the DC/AC Drive section for the AM12053V1 motor. The circuit is divided into two main sections: HIGH FREQUENCY and LOW FREQUENCY.

HIGH FREQUENCY Section:

- DC Input:** A 12V source is connected to the VCC pin of the DC/AC converter IC (IC1). The IC1 also has a GND pin and a VDD pin connected to a 5V source.
- Rectification and Filtering:** The DC input is connected to a diode bridge rectifier (D1-D4) and a filter capacitor (C1). The output of the rectifier is connected to the VCC pin of the DC/AC converter IC (IC1).
- IC1 Pin Connections:** The IC1 has a GND pin and a VDD pin connected to a 5V source. The output of the IC1 is connected to the VCC pin of the motor driver IC (IC2).
- IC2 Pin Connections:** The IC2 has a GND pin and a VDD pin connected to a 5V source. The output of the IC2 is connected to the motor terminals (A, B, C).

LOW FREQUENCY Section:

- IC3 Pin Connections:** The IC3 has a GND pin and a VDD pin connected to a 5V source. The output of the IC3 is connected to the motor terminals (A, B, C).
- IC4 Pin Connections:** The IC4 has a GND pin and a VDD pin connected to a 5V source. The output of the IC4 is connected to the motor terminals (A, B, C).
- IC5 Pin Connections:** The IC5 has a GND pin and a VDD pin connected to a 5V source. The output of the IC5 is connected to the motor terminals (A, B, C).

The motor is a 12V, 0.5A, 1200 RPM motor. The schematic also shows the internal components of the motor, including the stator windings and the rotor assembly.

Figure 15. PV current sensing section

