

12.3 Power Supply System

VB is the bias current input point in IC. The increase of R1 will reduce the current consumption in IC, but the shortage of bias current will affect the input range of AC measurement.

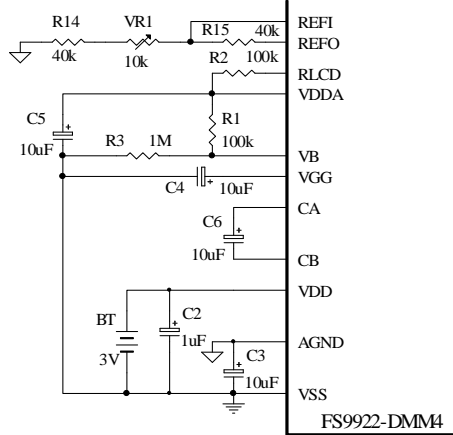


Diagram 4: Power Supply Circuit

AGND is the analog ground connection. Its potential is equal to the middle point of VDDA. The potential of the point is generated in the IC and cannot connect to the middle point of battery. C3 enables AGND stable relative to VSS. C6 is the charge pump, IC let VDD go through C6 to charge/discharge and make VGG to be double of VDD.

VDDA is the output voltage after the regulation of VGG in the IC. It is about 3.9V relative to VSS. REFO is the bandgap power source in the IC. It is about 1.2V relative to AGND and has the stability of 100ppm/°C.

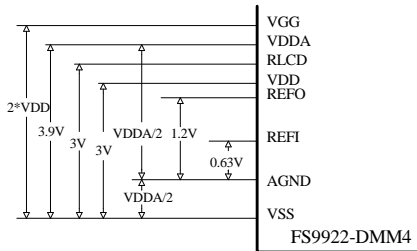


Diagram 5: Relative Voltage at each Point

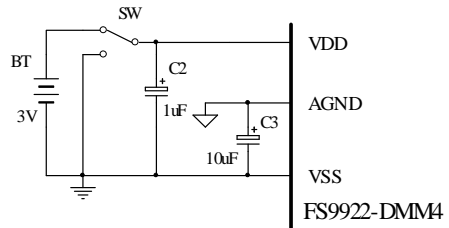


Diagram 6: Power Supply ON/OFF Circuit

Note: In order to avoid “hang up” when FS9922-DMM4 is power-on and off fast, SW should be connected to VSS.

12.4 Power Supply Circuit

The different applications of users make different power supply methods. In some measurements, the sensor requires higher voltage such as OPAMP, Hall device and so on. If it is difficult to supply the power by 3V, then you can take some power supply methods as below.

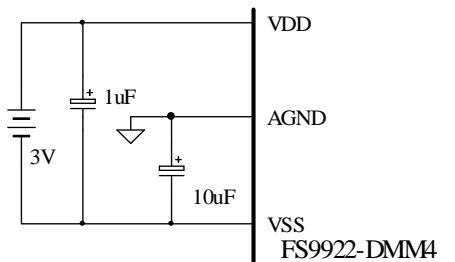


Diagram 7: 3V Power Supply

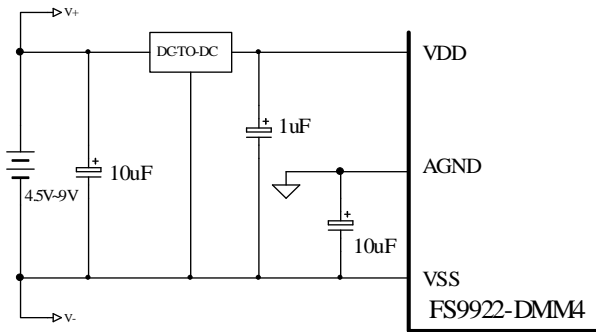


Diagram 8: 4.5V~9V Power Supply

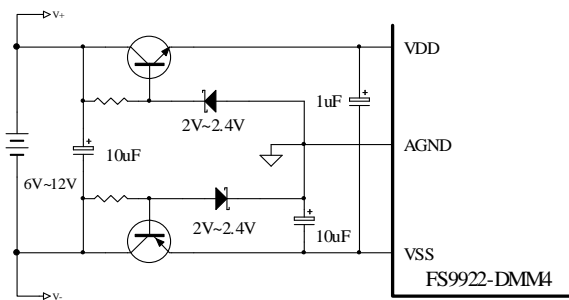


Diagram 9: 6V~12V Power Supply

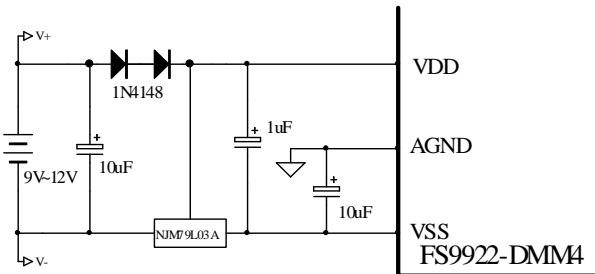


Diagram 10: 9V~12V Power

12.5 Base Power Source

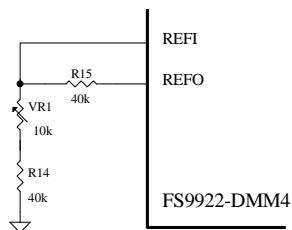


Diagram 11: The Utility of Internal Base Power Source

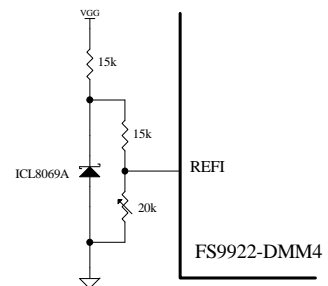


Diagram 12: The Utility of External Base Power Source