

## REAL TIME CLOCK (RTC) AND LOW POWER OPERATION OF MSP430FG4618

This document has the required information necessary to run the example code that exhibits ultra low-power current on the FG4618.

**Note: Read the Experimenter's User's Guide and the FET User's Guide documents for more information.**

### Requirements

Figure 1 shows the board with the associated jumpers and their configuration for proper functionality of the demonstration.

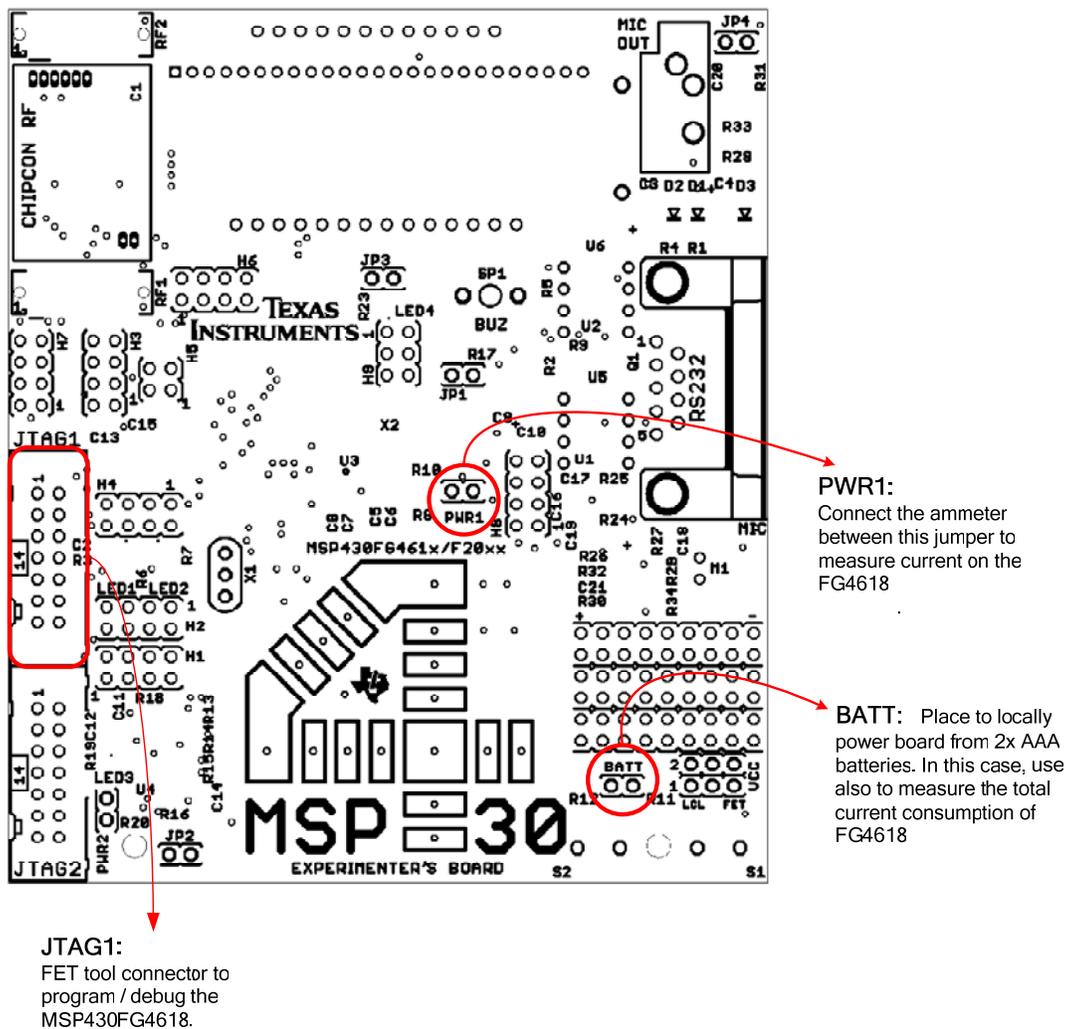


Figure 1: Board settings to demonstrate RTC and low power operation of FG4618

## Associated code files

The code files associated with this demonstration is

- FG4618\_RTC.c → Implements an RTC exhibiting low-power on the FG4618

## Steps to run the demonstration codes

1. Connect JTAG header of USB FET to JTAG1 to debug the FG4618
2. Open IAR Embedded Workbench V 3.42.
3. Choose **Project→ Add Existing Project** from the drop down menu.
4. Select the project file the FG4618\_RTC.ewp from current directory.
5. Confirm if the target is MSP430FG4618 and FET Debugger option is selected.
6. Build and load the project on the device by selecting **Project→ Debug**.
7. Come out of Debug mode by selecting **Debug→Stop Debugging**.
8. Disconnect JTAG header of USB FET from JTAG1.
9. This is a battery powered example so use the 2 AAA batteries and connect the jumper on **BATT**.
10. Remove jumper on **PWR1** and connect the Ammeter between the pins of header **PWR1**.
11. Remove any jumpers present on header **H1** and remove jumper on header **PWR2**.
12. Cycle power to the FG4618 by removing and placing the **BATT** jumper.
13. This should display a Real Time Clock operation on the LCD exhibiting an ultra-low power operation of the FG4618.
14. The LPM3 current should be around 4.5 microamperes.