

the oscillator, the semiconductor chip and the temperature sensing device are provided to a lead frame; and the oscillator and the temperature sensing device are electrically connected to the semiconductor chip through respective bonding wires.

3. The semiconductor device of claim **2**, wherein: the oscillator and the temperature sensing device are mounted on a first main face of the lead frame; and the semiconductor chip is mounted on a second main face that is on the opposite side of the lead frame to the first main face.

4. The semiconductor device of claim **3**, wherein: the lead frame includes a through hole that exposes a terminal portion of the oscillator and the temperature sensing device to the second main face side; and bonding wires are connected to respective terminal portions of the oscillator and the temperature sensing device exposed to the second main face side through the through hole.

5. The semiconductor device of claim **4**, wherein: the oscillator and the temperature sensing device are respectively mounted on a beam between two through holes.

6. The semiconductor device of claim **3**, wherein: the oscillator and the temperature sensing device are provided at positions that overlap with the semiconductor chip in a direction parallel to the first and second main faces.

7. The semiconductor device of claim **2**, wherein: the temperature sensing device is a thermistor that changes in resistance according to changes in temperature.

8. The semiconductor device of claim **2**, wherein: the temperature sensing device contains a resistor whose resistance changes according to changes in temperature, and a sealing section that seals the resistor; and the oscillator includes a vibration reed, and a sealing section that seals the vibration reed in a vacuum.

9. The semiconductor device of claim **2**, wherein: a distance between the oscillator and the temperature sensing device is longer than a distance between the oscillator and the semiconductor chip.

10. The semiconductor device of claim **1**, wherein: the discrete device contains the capacitor; the oscillator, the semiconductor chip and the capacitor are provided on the lead frame; the oscillator and the capacitor are electrically connected through a bonding wire; and the capacitor and the semiconductor chip are electrically connected through a bonding wire.

11. The semiconductor device of claim **10**, wherein: the oscillator and the semiconductor chip are mounted on a first main face of the lead frame; and the capacitor is mounted on a second main face that is on the opposite side of the lead frame to the first main face.

12. The semiconductor device of claim **11**, wherein: the lead frame includes a through hole that exposes a terminal portion of the capacitor to the first main face side; and

the bonding wire is connected to a terminal portion of the capacitor exposed to the first main face side through the through hole.

13. The semiconductor device of claim **10**, wherein: the capacitor is mounted between the oscillator and the semiconductor chip.

14. The semiconductor device of claim **10**, wherein: the capacitor has temperature characteristics that act towards cancelling out frequency-temperature characteristics of the oscillation circuit.

15. The semiconductor device of claim **2**, wherein: the lead frame is applied with a ground electrical potential.

16. The semiconductor device of claim **15**, wherein: a first terminal portion of the capacitor is joined to the lead frame using a conductive bonding material, and a second terminal portion of the capacitor is connected using a bonding wire.

17. The semiconductor device of claim **1**, wherein: the frequency correction section includes a first register that stores the temperature data, and a second register that stores a frequency correction amount of the timing signal derived based on the temperature data; and

when a difference between a temperature expressed by temperature data during frequency correction the previous time stored in the first register and a temperature expressed by temperature data during frequency correction the current time supplied from the temperature sensing device is a specific value or greater than the specific value, a frequency correction amount is derived for the timing signal based on the temperature data of during frequency correction the current time supplied from the temperature sensing device, and frequency correction of the timing signal is performed based on the derived frequency correction amount; and

when the difference is less than the specific value, frequency correction of the timing signal is performed based on the frequency correction amount corresponding to the temperature data during frequency correction the previous time stored in the second register.

18. The semiconductor device of claim **1**, wherein: the frequency correction section derives a first frequency correction amount for correcting for frequency change in the timing signal caused by temperature changes, and derives a second frequency correction amount for correcting for frequency change in the timing signal caused by deterioration of the oscillator over the years, and corrects the frequency of the timing signal based on the derived first and second frequency correction amounts.

19. The semiconductor device of claim **18**, wherein: the frequency correction section includes a storage section stored with a frequency change amount of the timing signal caused by deterioration of the oscillator over the years and a timer counter that counts cumulative time; and

when a count value of the timer counter reaches a specific value, the second frequency correction amount is derived based on the frequency change amount stored in the storage section.

20. A metering apparatus comprising: within a single package,

a semiconductor device that includes:

an oscillator,

a semiconductor chip that includes:

an oscillation circuit connected to the oscillator,

a timer circuit that generates a timing signal of a frequency according to the oscillation frequency of the oscillation circuit, and

a frequency correction section that corrects a frequency of the timing signal based on temperature data, and