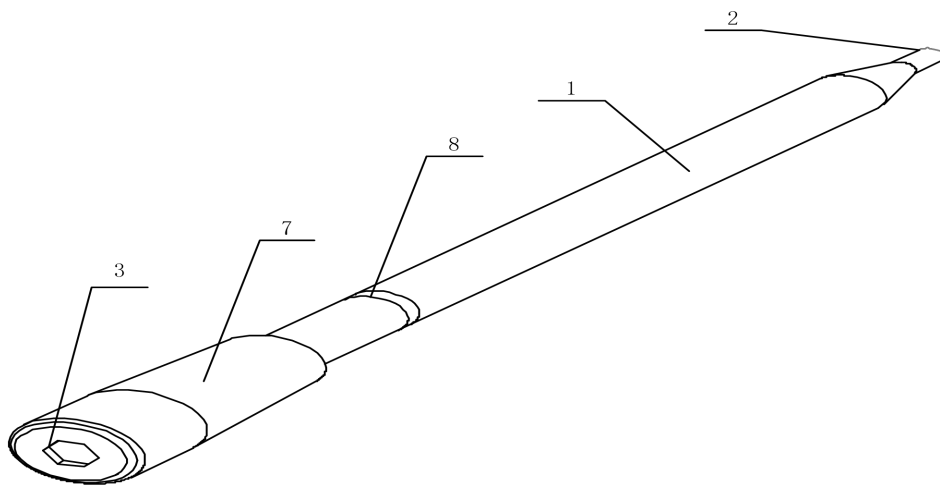


说明书摘要

The utility model discloses an intelligent direct connection temperature probe, Including subject, The probe is set at one end of the main body, The be is used to insert into food, Measure the temperature in the food room; The other end of the main body is provided with the electric metal sheet, For the charging of the direct connection temperature probe; The main body is equipped with control board, elastic card connector, shrapnel corresponding to two positions, The elastic card connector card is connected to one end of the control board and shall contradict the electric metal sheet, The shrapnel corresponding to the two positions contradict the inner wall of the main body respectively; The control board is equipped with a digital pulse temperature measurement IC, The rate of food temperature change is determined by measuring the time of appreciation on the food temperature; And estimate the completion time at least according to the determined rate of food temperature change; The main body is located at one end of the electric metal piece sleeve is equipped with a rubber sleeve, There is a limit indicator line on the main body; The rapnel are made of phosphorus steel, The elastic card connector card is attached to the control board, Three-point contact charging, The large contact area, Measuring the temperature is more accurate.



摘要附图

1. An intelligent direct-connection temperature probe, It is characterized by the fact that, Including subject, The probe is provided at one end of the main body, The probe is used to insert into the food contents, Measure the temperature in the food room; An electric metal sheet is provided at the other end of the main body, For charging the direct-connection temperature probe; The main body is provided with a control board, an elastic card connector, a shrapnel corresponding to two positions, The elastic card attachment card is connected to one end of the control board and contradicts the electric metal sheet, The shrapnel corresponding to the two positions respectively contradict the inner wall of the main body; The control board is provided with a digital pulse temperature measurement IC, The rate of food temperature change is determined by measuring the time of appreciation on the food temperature; And estimate the completion time at least according to the determined rate of food temperature change; The main body located at one end sleeve of the electric metal piece is provided with a rubber sleeve, A limit indicator line is provided on the main body.

2. An intelligent direct connection temperature probe of claim 1, wherein the control plate is provided with a ceramic antenna located in the rubber sleeve and embedded in the control board and in contact with the elastic card connector; the direct connection temperature probe is connected to an external intelligent device through a ceramic antenna.

3. An intelligent direct connection temperature probe according to claim 1, wherein the control board is also provided with a Bluetooth master chip and a charge-discharge protection IC; the ceramic antenna forms a temperature measuring circuit with the Bluetooth master chip and the charge-discharge protection IC through the coaxial signal lines of the control board.

4. An intelligent direct connection temperature probe according to

摘要附图

claim 1, wherein the elastic card connector forms the positive and negative electrode of the control plate, and the elastic card connector forms the charging switching switch circuit through the control board coaxial signal line and the ceramic antenna to the shrapnel corresponding to the two positions.

5. An intelligent direct connection temperature probe according to claim 1, wherein the control board is also provided with a low voltage drop regulator (LDO) for voltage regulation of the temperature measuring circuit.

6. An intelligent direct connection temperature probe according to claim 1, wherein the main body is also provided with a temperature sensor electrically connected to the control board.

7. An intelligent direct connection temperature probe according to claim 1, wherein the control panel side is further provided with a lithium ion capacitor for powering the direct connection temperature probe; a limit spring is provided between the lithium ion capacitor and the probe.

8. An intelligent direct connection temperature probe according to claim 1, wherein the body located at the limit indicator line to the probe is made of stainless steel.

An intelligent direct-connection temperature probe

Technical field

The utility model relates to the technical field of temperature probe, especially an intelligent direct connection temperature probe.

Background technology

With the improved living standards, People are also becoming more demanding of food, The temperature of the food is closely related to its taste and nutrition; Every food that people taste in their lives tastes best at a particular temperature, During barbecue and cooking, To ensure that the food has a good taste, Need for a real-time detection of the temperature of the food, Food temperature probe is a temperature probe developed to improve people's healthy living standard; The food temperature probe detects the temperature of the food by inserting the temperature measurement probe into the food, Existing smart wireless food temperature probes are too cumbersome, Too many unnecessary functions, Occupup too many smart device resources, NTC simulation temperature measurement with the ambient temperature change large deviation problem; at the same time, Poor water resistance effect, Affect the service life of the food temperature measuring probe.

Utility model content

The purpose of the utility model is to solve the shortcomings existing in the prior technology.

In order to achieve the above purpose, the utility model adopts the following technical scheme:

An intelligent direct-connection temperature probe, Including

说明书附图

subject, The probe is provided with one end of the main body, The probe is used to insert into the food contents, Measure the temperature in the food; An electric metal sheet is provided at the other end of the main body, For charging the direct-connection temperature probe; The main body is provided with a control board, elastic card connector, shrapnel corresponding to two positions, The elastic card attachment card is connected to one end of the control board and contradicts the electric metal sheet, The shrapnel corresponding to the two positions respectively contradict the inner wall of the main body; The control board is provided with a digital pulse temperature measurement IC, The rate of food temperature change was determined by measuring the time of appreciation in food temperature; And estimate the completion time at least according to the determined rate of food temperature change; The main body located at one end sleeve of the electric metal piece is provided with a rubber sleeve, A limit indicator line is provided on the main body.

Preferably, the control board is provided with a ceramic antenna located in the rubber sleeve and embedded in the control board and in contact with the elastic card connector; the directly connected temperature probe is connected to an external intelligent device through the ceramic antenna.

Preferably, the control board is provided with a ceramic antenna located in the rubber sleeve and embedded in the control board and in contact with the elastic card connector; the directly connected temperature probe is connected to an external intelligent device through the ceramic antenna.

Preferably, the control board is also provided with a Bluetooth master chip and a charge / discharge protection IC; the ceramic antenna forms

说明书附图

a temperature measuring circuit with the control board and the charge and discharge protection IC.

Preferably, the elastic card connector and the shrapnel corresponding to the two positions form the charging positive and negative electrodes of the control board, and the elastic card connector forms the charging switching switch circuit through the coaxial signal line of the control board and the ceramic antenna with the shrapnel corresponding to the two positions.

Preferably, the control board is also provided with a low voltage drop regulator (LDO) for the voltage regulation of the temperature measuring circuit.

Preferably, the main body is also provided with a temperature sensor that is electrically connected to the control board.

Preferably, the control panel side is also provided with a lithium ion capacitor for powering the direct connection temperature probe; a limit spring is provided between the lithium ion capacitor and the probe.

Preferably, the body from the limit indicator line to the probe is made of stainless steel.

Compared with the prior art, the beneficial effects of the utility model are:

The utility model designs an intelligent direct connection temperature probe, the ceramic antenna with coaxial signal line; the ceramic antenna is ceramic, weighing only 200g, its frequency range is between 02 MHz and 28 MHz. In terms of dielectric loss, the ceramic medium is less than that of pcb circuit board, so it is very suitable for use in the Bluetooth module with low power consumption rate; the shrapnel is made of phosphorus steel, and the elastic card connector card is connected to the control board, three points contact charging, large contact area, and temperature measurement is more accurate.

说明书附图

Attached figure description FIG.

1 is a schematic diagram of the utility model; FIG.

2 is a perspective view of the direct connection temperature probe proposed by the utility model; FIG.

3 is a schematic diagram of the elastic card connector proposed by the utility model; FIG.

4 is a schematic diagram of the shrapnel structure by the utility model; FIG.

5 is a Bluetooth master circuit diagram proposed by the utility model; FIG.

6 is a circuit diagram of the charging switching switch proposed by the utility model; FIG.

7 is a circuit diagram of a Bluetooth antenna proposed by the utility model; FIG.

8 is a temperature detection circuit diagram proposed by the utility model.

legend:

1, the main body,	2, the probe,
3, the electric metal sheet,	4, the control board,
5, elastic card connector,	6, shrapnel,
7, rubber sleeve,	8, limit indication line,
9, lithium ion capacitor,	
10, limitspring.	

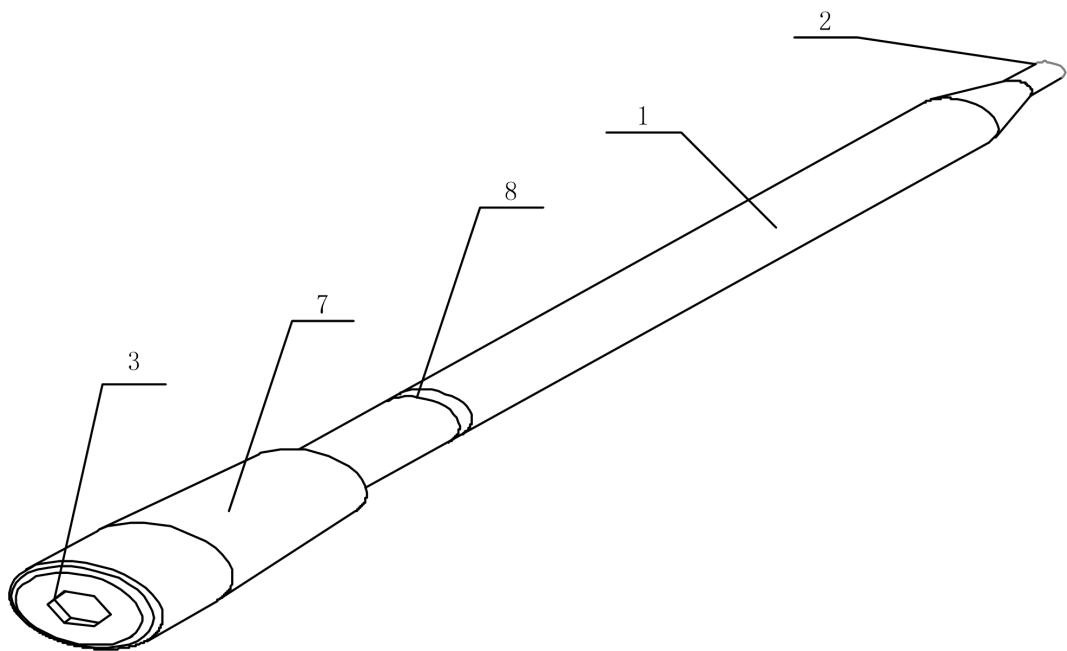


图 1

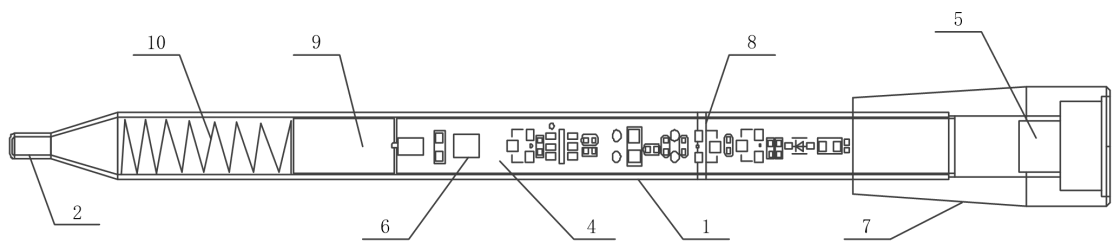


图 2

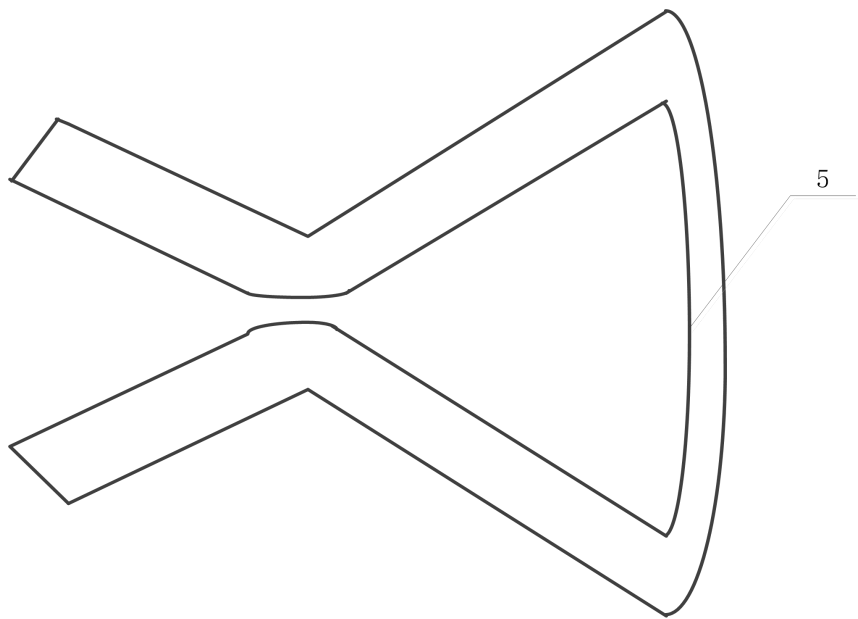


图 3

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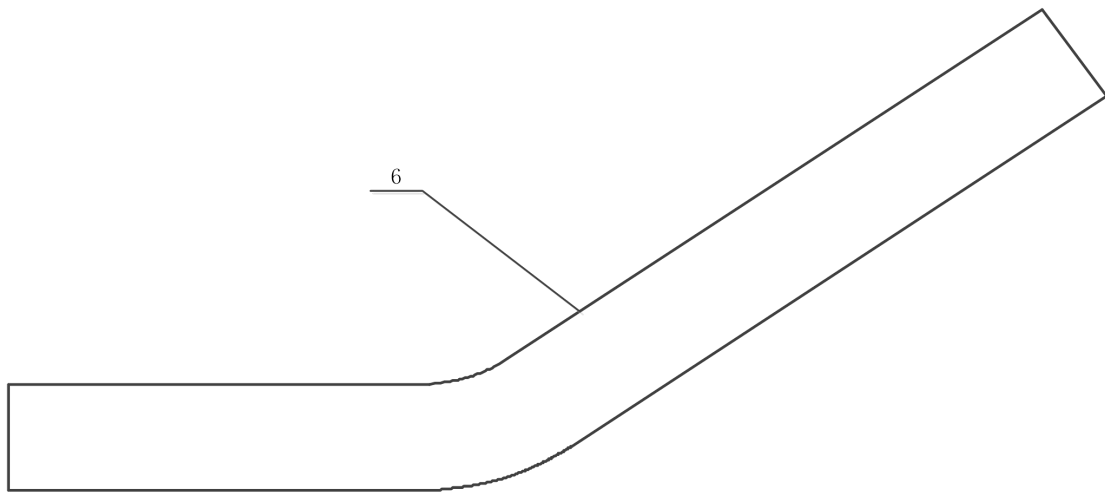


图 4

Warning:

Changes or modifications to this unit not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

NOTE:

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

FCC Statement:

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to

说明书附图

radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

The product is a portable device and meets the exposure assessment requirements for portable devices.