

Specification

Customer : _____

Product name: ultrasonic transducer

Part number: FBUT20K

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| confirmation form | |
|-----------------------|---------|
| Customer | |
| P/N | FBUT20K |
| Customer's P/N | |

| Customer Confirmation | |
|-----------------------|--|
| Confirmor | |
| Date | |

Please return this page to us as proof of confirmation.

1 Scope of application

This product specification is applicable to FBUT20K ultrasonic transducer.

2 Product number: FBUT20K

3 Model Nomenclature

| | | |
|----|----|-----|
| FB | UT | 20K |
|----|----|-----|

① ② ③

①Product Code

FB: piezoceramic transducer

②products type

UT: Ultrasonic transducer

③operating frequency

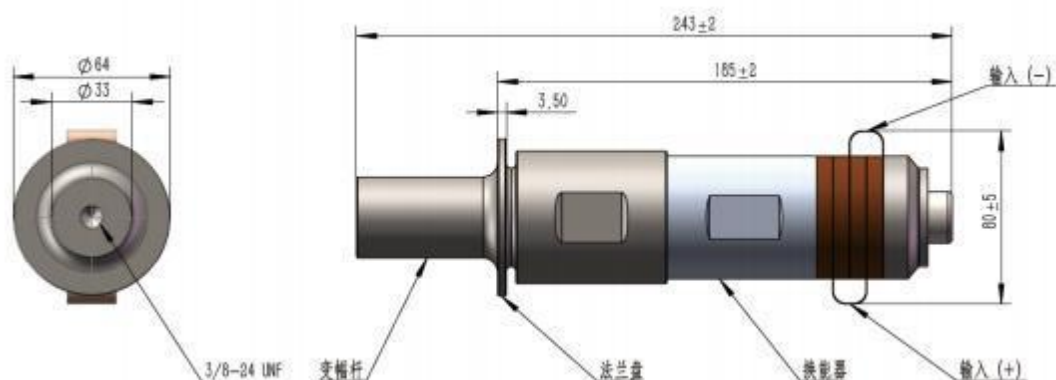
20 KHz

4 Appearance and shape

4.1 Appearance: The mark is clear, without stain and damage.

4.2 Comply with ROHS directive and national environmental protection laws and regulations.

4.3 Dimensions (unit: mm)



5 performance

| Item | Unit | Standard value |
|------------------------------|------------|----------------|
| Nominal frequency (Freq.) | KHz | 20 |
| Resonant frequency (Fr) | KHz | 19.3~20.1 |
| Resonant impedance (R_0) | Ω | ≤ 25 |
| Capacitance (C_p) | nF | $12 \pm 20\%$ |
| Insulation resistance (R) | M Ω | ≥ 1000 |
| Power (PWR) | W | 2000 |

6 Test methods

6.1 Test conditions

The test should be carried out in an environment with a temperature of $(25 \pm 3)^\circ\text{C}$ and a relative humidity of 40% to 70% R.H.

6.2 Test method

| Item | Test method |
|------------------------------|--|
| Resonant frequency (Fr) | Measure thickness vibration mode, impedance analyzer or test circuit shown in Figure 1 |
| Resonant impedance (R_0) | |
| Capacitance (C_p) | digital bridge, 1KHz/1V |
| Insulation resistance (R) | Megger or Insulation Resistance Tester, 2500V/50Hz |

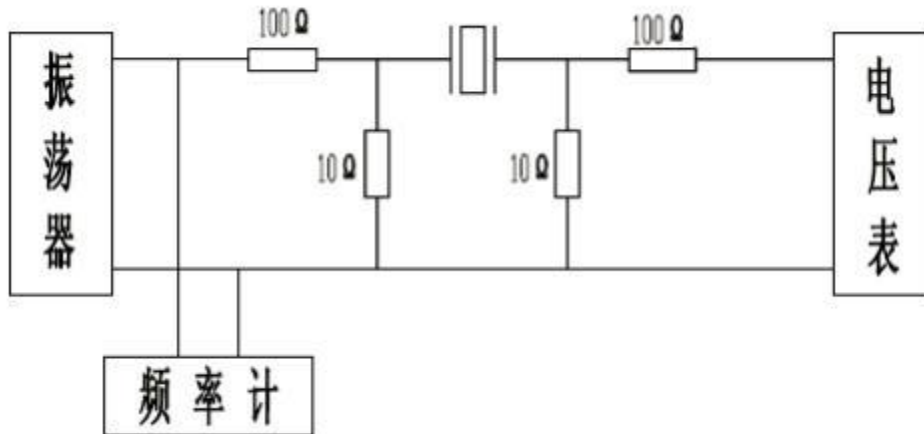


Figure 1. Test Circuit Diagram

Description: a Oscillator: the frequency range should meet the requirements of the sample test, and the output waveform is a sine wave;

b Frequency meter: the test error is not greater than $\pm 10\text{Hz}$;

c Voltmeter: the range is $10\sim 1000\text{mV}$, and the test error is not more than $\pm 3\%$.

7 packages

In order to protect the product during storage and transportation, it is necessary to pack the product inside and outside. The outer packaging of this product is made of 8mm thick corrugated paper, and there is a pearl cotton foam disc inside. 1 product per box,

The product name, quantity, and production date are marked on the package.

8 Precautions

8.1 Please do not make the transducer work for a long time (more than 10min) under no-load condition, otherwise it may appear

Risk of burns or damage to the transducer.

8.2 During the installation process, please pay attention to avoid hitting the transducer, and do not apply excessive force to the input terminal of the transducer.

Excessive force may damage the product.

8.3 The flange protruding from the middle part of the horn of the transducer is the only place where it can be fixed with the casing, and the rest of the parts cannot contact or interfere with the casing or other

parts. There is no pulling between the transducer and the power supply, otherwise it will affect the working efficiency of the transducer and the reliability of the solder joints. 8.4 The excitation voltage of the transducer should be lower than 2000Vp-p. If the operating voltage is higher than 2000Vp-p, it will shorten

The service life of the transducer.

8.5 The transducer is made of metal, so be sure to avoid placing it in a strong acid and alkali environment, or contacting a strong acid and alkali liquid.

8.6 The piezoelectric ceramic crystal stack material of the transducer is mainly lead zirconate titanate ceramics, please pay attention to complying with the local environmental regulations when discarding.

protection regulations.

8.7 The transducer has a strong voltage during operation, so be sure to avoid touching the ceramic body of the transducer and the input terminal to avoid

Risk of electric shock.

8.8 The performance parameters mentioned in the specification refer to isolated components, please fully evaluate them in the whole circuit

Taking into account the influence of other factors.

8.9 Be sure to operate in accordance with the relevant precautions in this specification, otherwise fatal danger will occur.

8. 10 After you confirm, please return the customer confirmation letter (the second page of this specification) to us.

8. 11 If you have any doubts about this specification, we can negotiate together.