

ULTRASONIC SENSOR

Customer	
Customer P/O	
Customer Spec. No.	
Bestar Model Name	BPU-1640IOAH12
Product No.	100902
Issue No.	BS/TEP01.201A
Issue Date	03/10/06

Approval:

- 1.Applications
- 2.Features
- 3.Technical terms
- 4.Drawing
- 5.Beam Pattem
- 6.Test Circuit
- 7.Reliability Test

Prepared	Chec.	Appr.	Revision		
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			1		
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Reference:

超声波探头GS认证中的C12-5-2标准



BESTAR ELECTRONICS INDUSTRY CO.,LTD
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BPU-1640IOAH12

1.Applications

Burglar alarms、 Range finders、 Automatic doors、 Remote control.

2.Features

- 2.1) Open struct and Dual use
- 2.2) Compact and light weight.
- 2.3) High sensitivity and sound pressure.
- 2.4) Less power consumption.
- 2.5) High reliability

3.Technical terms

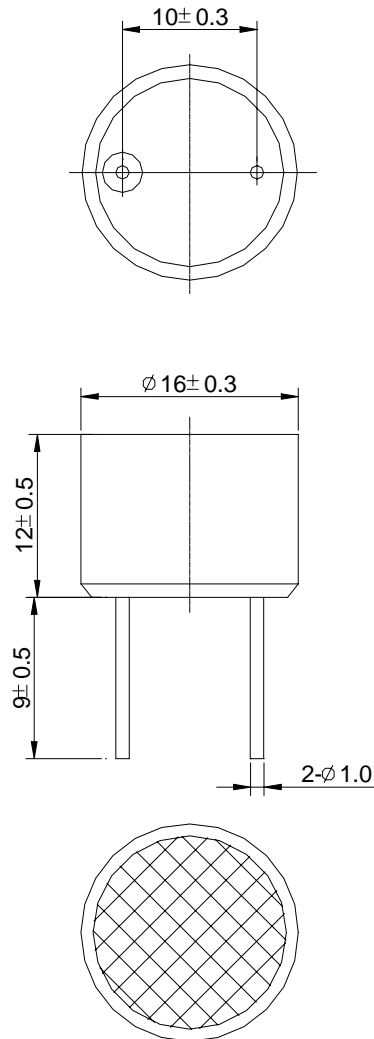
No.	Item	Specification
1.	Construction	Open Struct
2.	Using Method	Dual Use
3.	Center Frequency	40kHz
4.	Transmitting Sound Pressure Level	min115dB (30cm/10Vrms Sine Wave)
5.	Receive Sensitive	min-74dB/V/ μ bar
6.	-6dB Directivity	50deg
7.	Sensitivity Distance	min.13m
8.	Capacitance	2000pF± 20% at1KHz
9.	Operating Tem.Range	-30 to 85° C
10.	Allowable Input Voltage	120 Vp-p(40KHz)
11.	Housing Material	Aluminum

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4. Drawing

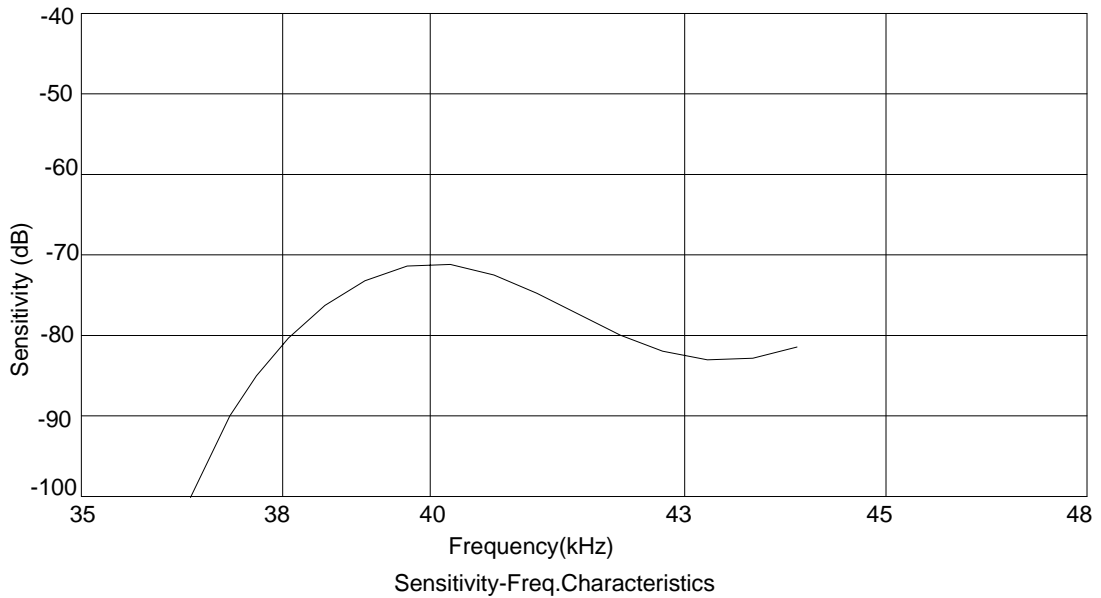
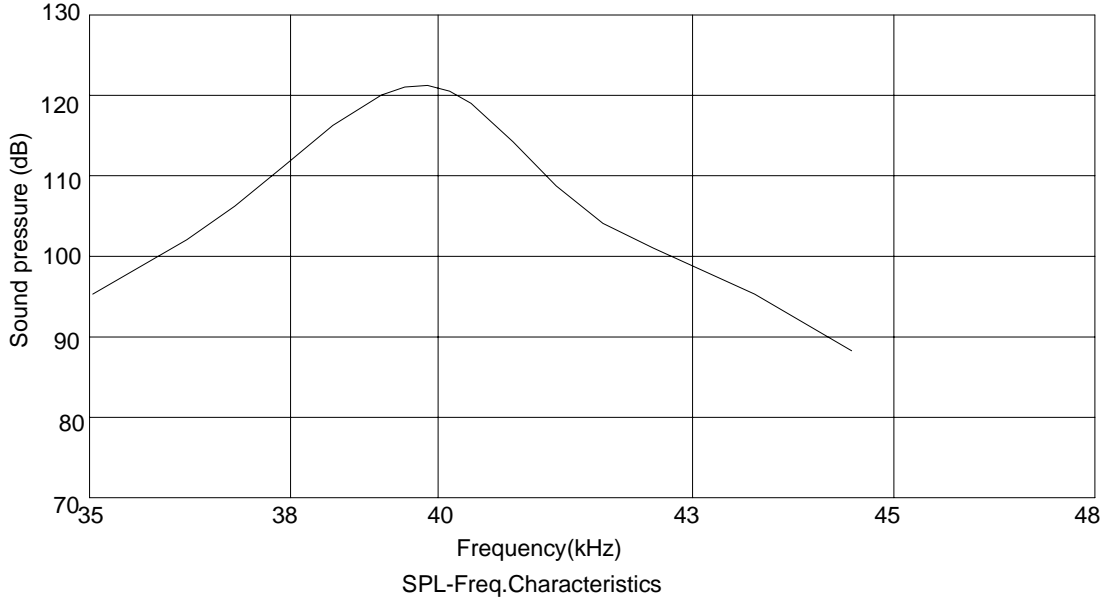


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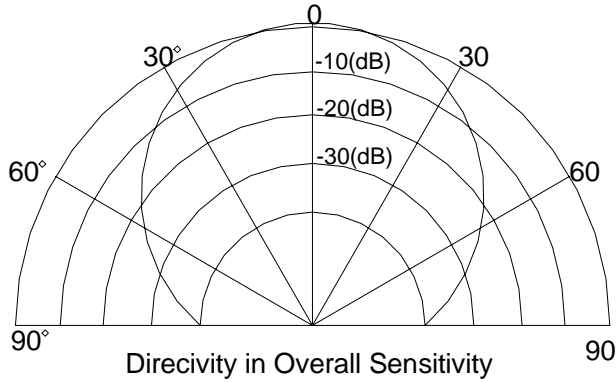
5. Beam Pattern



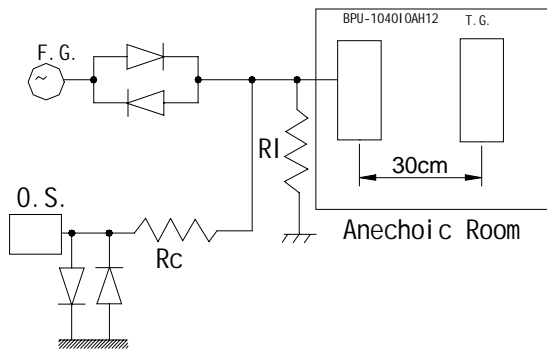
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6. Test circuit



Rl: 3.9KΩ Rc=1kΩ

T.G. :Target
 F.G. :Function Generator
 O.S. :Oscilloscope

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7. Reliability Test

- | | | |
|---|---|------------------------------------|
| 7.1 | High temp.life test | |
| | Temperature | +85° C |
| | Duration | 200hrs |
| 7.2 | Low temp.life test | |
| | Temperature | -40° C |
| | Duration | 200hrs |
| 7.3 | Heat Cycle Test | |
| | Temperature | +85± 3° C 1hour
-40± 3° C 1hour |
| | Cycles | 100cycles |
| 7.4 | Humidity Test | |
| | Temperature | +65° C |
| | Relative Humidity | 90~95% |
| | Duration | 200hrs |
| Tests above should be measured after leaving normal temperature for24hrs. | | |
| 7.5 | Vibration Test | |
| | Vibration Frequency | 10~200Hz |
| | Sweep Period | 15min |
| | Acceleration | 43.12m/s ² |
| | Direction | 3(x.y&z) |
| | Time | 96hours/direction |
| *7.6 | Life test in normal temperature(25° C reference) | |
| | Power supply | 10V (40KHz ,square wave) |
| | Duration | 4hours |
| 7.7 | Shock test | |
| | Acceleration | sine 980 m/s ² |
| | Direction | 3directions |
| | Shock time | 3 time/directions |
| 7.8 | Drop test | |
| | Height | 1m |
| | (Dropped to 20mm thick hardwood board without packing.) | |
| | Times | 10times |

Notice:

The variation of the S.P.L at 40KHz is within 3dB compared with initial figures at 25° C after above test condition
after 7.6 test conditions, repeat test 20 times or more,the product must be have request distance response .

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