



HESTORE.HU

elektronikai alkatrész áruház

EN: This Datasheet is presented by the manufacturer.

Please visit our website for pricing and availability at www.hestore.hu.

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 | | |
|----------|-------|-------|----------|------|----------|
| | | | No. | Date | Contents |
| | | | 0 | | |
| | | | 1 | | |
| | | | 2 | | |
| | | | 3 | | |

Reference:

超声波探头GS认证中的C12-5-2标准



BESTAR ELECTRONICS INDUSTRY CO., LTD
Site B, TianAn Industry, New District, ChangZhou, P.R.China
Tel:86-519-5103228
Fax:86-519-5131010
Http:www.be-star.com
E-Mail:bestarco@pub.cz.jsinfo.net

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

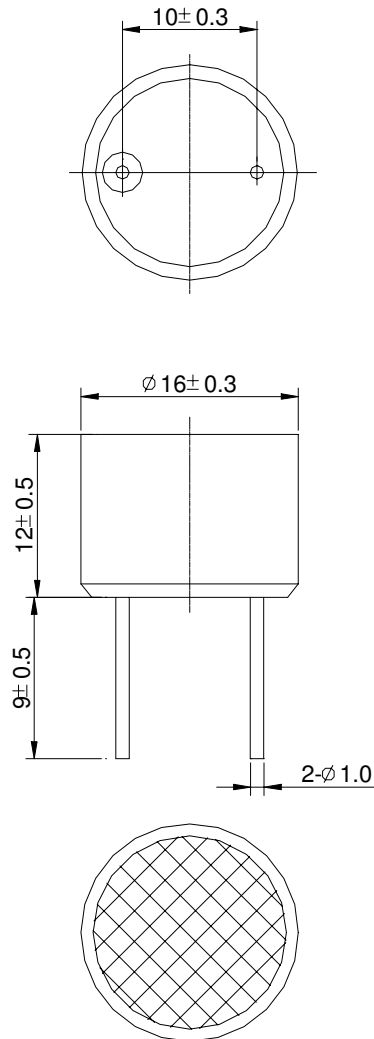
| No. | Item | Specification |
|-----|-----------------------------------|----------------------------------|
| 1. | Construction | Open Struct |
| 2. | Using Method | Dual Use |
| 3. | Center Frequency | 40kHz |
| 4. | Transmitting Sound Pressure Level | min115dB (30cm/10Vrms Sine Wave) |
| 5. | Receive 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 |

This print and information therein are proprietary to Bestar Electronics Industry Co., Ltd. and shall not be used in whole or in part without its written content 100902

| | | | | | |
|---|--|------|--|--|-------------------------|
| DIS. | | DATE | | Page:1 of 5 3rd angle projection | BPU-1640IOAH12 |
| CHEC. | | DATE | | | Ultrasonic Sensor |
| APPR. | | DATE | | | |
|  BESTAR ELECTRONICS INDUSTRY CO.,LTD TianAn Industry Park 4/F,Site B ChangZhou New District E-Mail:bestarco@ pub.cz.jsinfo.net Http:www.be-star.com | | | | | DRG NO BS/TEP01.201A |

BPU-1640IOAH12

4. Drawing

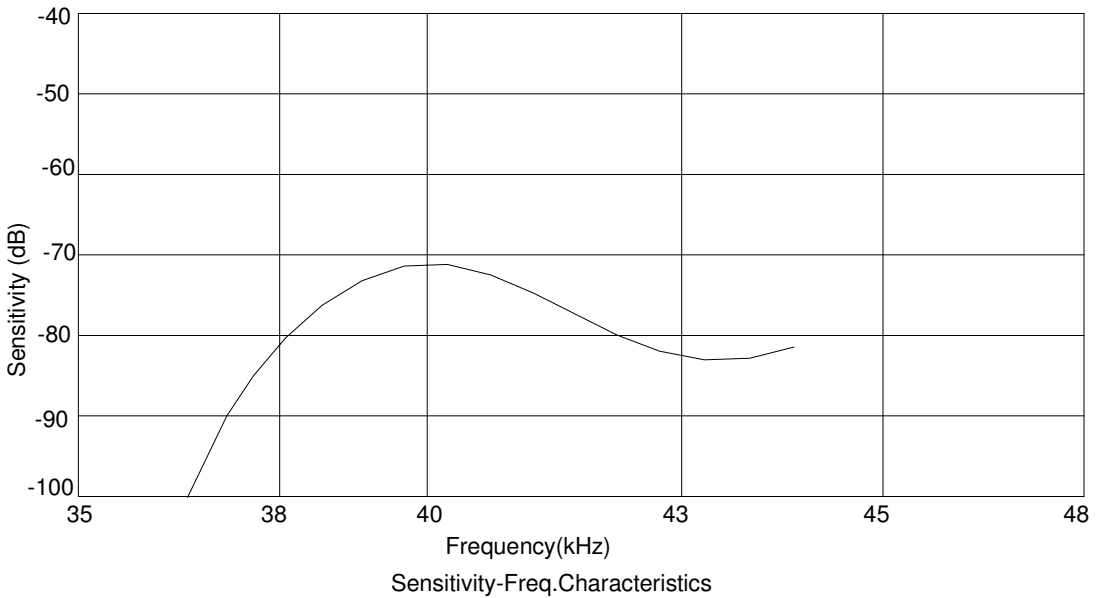
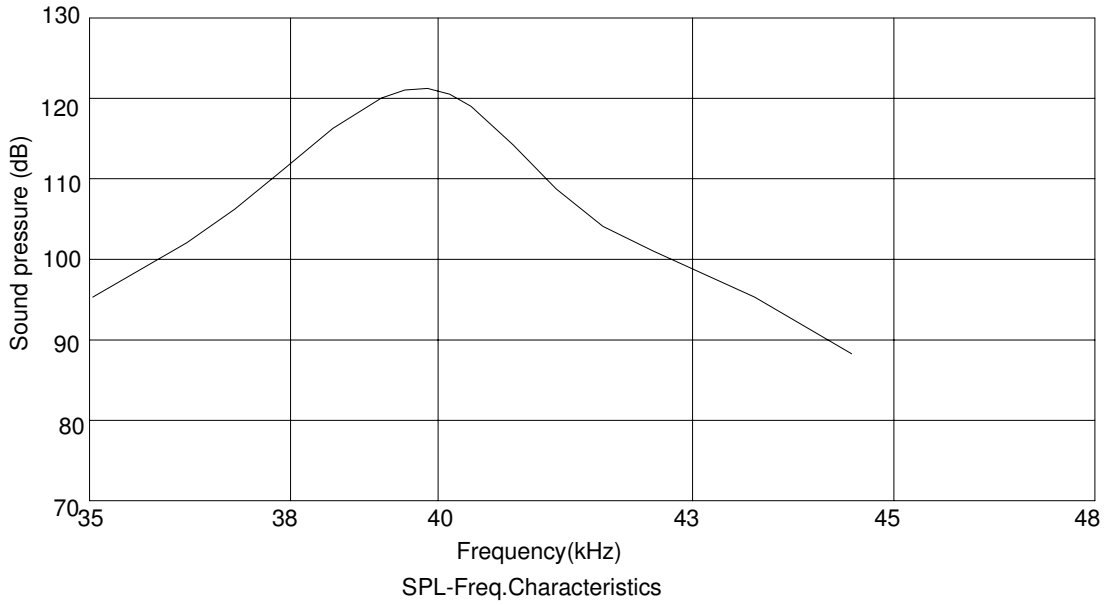


This print and information therein are proprietary to Bestar Electronics Industry Co., Ltd. and shall not be used in whole or in part without its written content 1009900

| | | | | | |
|---|--|------|--|-------------|----------------------|
| DIS. | | DATE | | Page:2 of 5 | BPU-1640IOAH12 |
| CHEC. | | DATE | | | 3rd angle projection |
| APPR. | | DATE | | | |
|  BESTAR ELECTRONICS INDUSTRY CO.,LTD TianAn Industry Park 4/F,Site B ChangZhou New District E-Mail:bestarco@ pub.cz.jsinfo.net Http:www.be-star.com | | | | | |

BPU-1640IOAH12

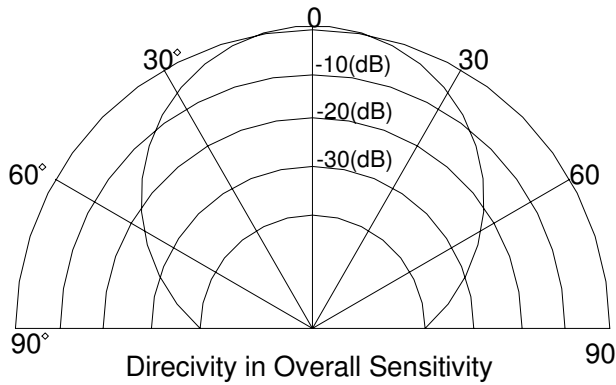
5. Beam Pattern



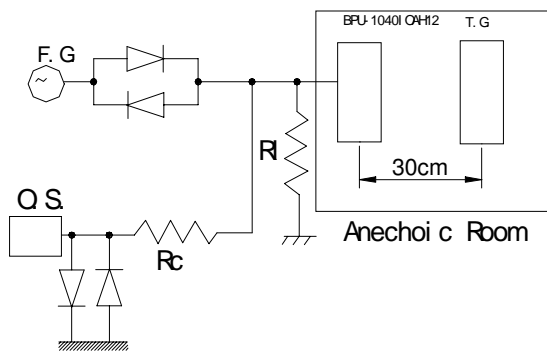
This print and information therein are proprietary to Bestar Electronics Industry Co., Ltd. and shall not be used in whole or in part without its written content 100902

| | | | | | |
|--|--|------|--|-------------------------------------|-------------------------|
| DIS. | | DATE | | Page:3 of 5 3rd angle projection | BPU-1640IOAH12 |
| CHEC. | | DATE | | | Ultrasonic Sensor |
| APPR. | | DATE | | | |
|  BESTAR ELECTRONICS INDUSTRY CO., LTD TianAn Industry Park 4/F, Site B ChangZhou New District E-Mail:bestarco@pub.cz.jsinfo.net Http:www.be-star.com | | | | | DRG NO BS/TEP01.201A |

BPU-1640IOAH12



6. Test circuit



Rl: 3.9K Ω

Rc=1k Ω

T.G. :Target

F.G. :Function Generator

O.S. :Oscilloscope

This print and information therein are proprietary to Bestar Electronics Industry Co., Ltd. and shall not be used in whole or in part without its written content 100902

| | | | | | |
|---|--|------|--|-------------------------|-------------------|
| DIS. | | DATE | | Page:4 of 5 | BPU-1640IOAH12 |
| CHEC. | | DATE | | 3rd angle projection | Ultrasonic Sensor |
| APPR. | | DATE | | | |
| BESTAR ELECTRONICS INDUSTRY CO., LTD TianAn Industry Park 4/F, Site B ChangZhou New District E-Mail:bestarco@ pub.cz.jsinfo.net Http:www.be-star.com | | | | DRG NO BS/TEP01.201A | |

This print and information therein are proprietary to Bestar Electronics Industry Co., Ltd. and shall not be used in whole or in part without its written content 100902

BPU-1640IOAH12

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/s²
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/s²
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 .

| | | | | | |
|---|--|------|--|--|-------------------------|
| DIS. | | DATE | | Page:5 of 5 3rd angle projection | BPU-1640IOAH12 |
| CHEC. | | DATE | | | |
| APPR. | | DATE | | | Ultrasonic Sensor |
|  BESTAR ELECTRONICS INDUSTRY CO.,LTD TianAn Industry Park 4/F,Site B ChangZhou New District E-Mail:bestarco@ pub.cz.jsinfo.net Http:www.be-star.com | | | | | DRG NO BS/TEP01.201A |