



SPECIFICATION FOR ULTRASONIC SENSOR

TOTAL PAGE

09

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ROHS

Customer		Model Name	BPU1640IOPBH12
Customer P/N		Product No.	100200
Date	31. Jul. 2012	Issue No.	BS/TEU01.008C
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Approval:

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- 10.Note
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Drawn by	Checked by	Approved by	Customer approved
祁小柯	邹东平	李红元	

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BPU1640IOPBH12



1.Applications

Burglar alarms , Range finds , Automatic doors , Remote control.

2.Features

- 2.1)Open structure 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.

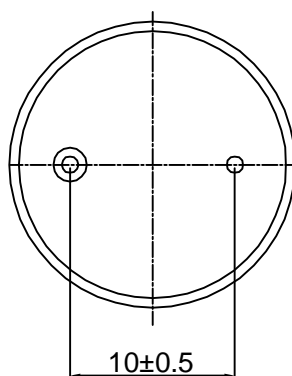
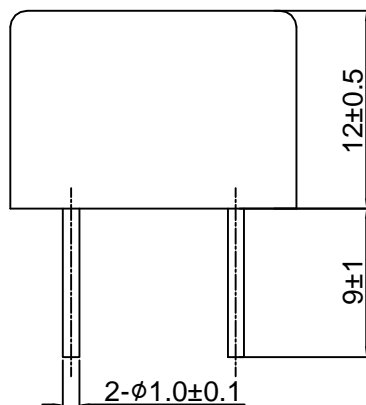
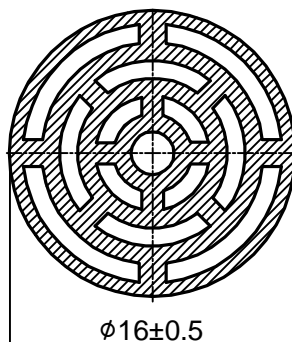
3.Technical terms

No.	Item	Unit	Specification
1.	Construction		Open Structure
2.	Using Method		Dual Use
3.	Frequency	KHz	40±1K Hz
4.	Sound Pressure Level	dB	min.110dB (10V/30cm)
5.	Sensitivity	dB	min. -65dB /V/ μbar
6.	Capacitance	pF	2500pF±25% at 1KHz
7.	Directivity	°	50deg
8.	Operating Tem.Range	℃	-40 to +85℃
9.	Storage Tem.Range	℃	-40 to +85℃
10.	Detectable Range	m	0.7...18m
11.	Maximum Input Voltage	Vp-p	60Vp-p
12.	Net weight	g	1.54g/pcs
12.	Housing Material		Plastic

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4.Drawing

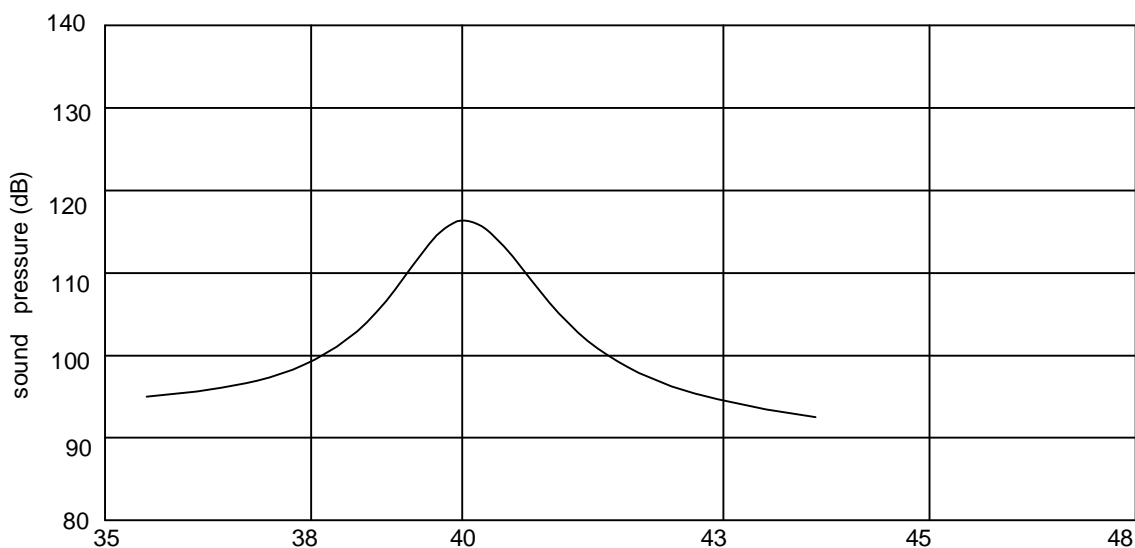


unit:mm

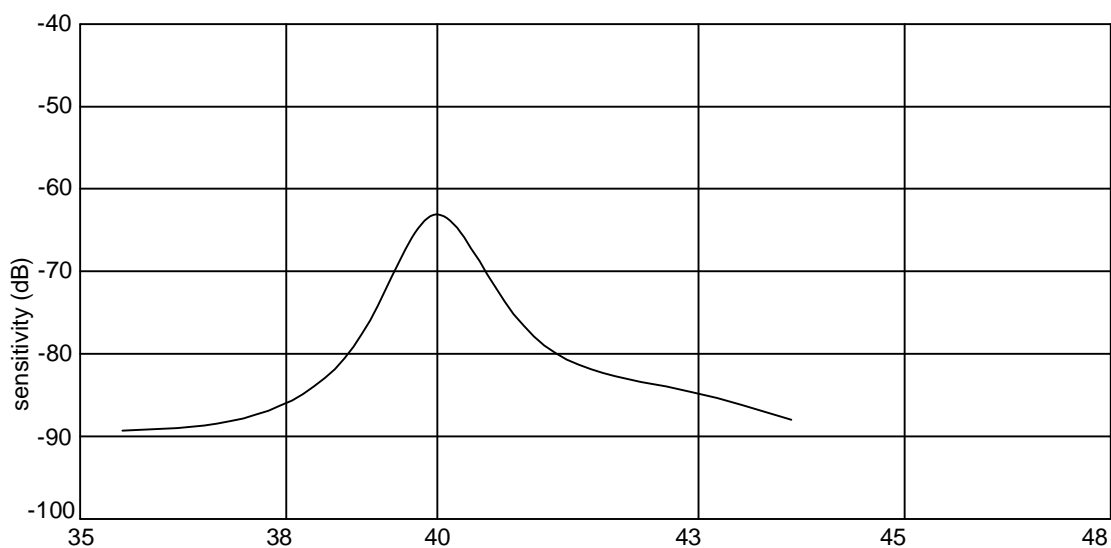
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5. Beam Pattern



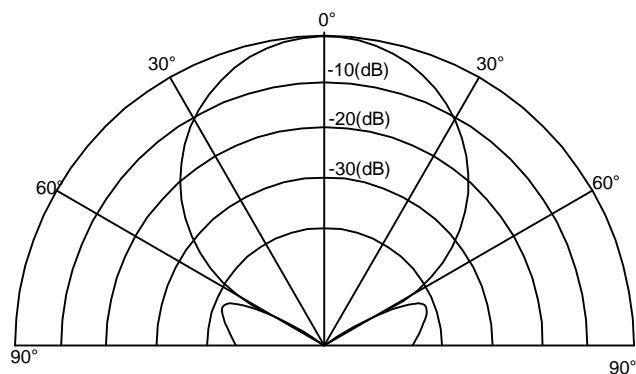
SPL-Freq. Characteristics



Sensitivity-Freq. Characteristics

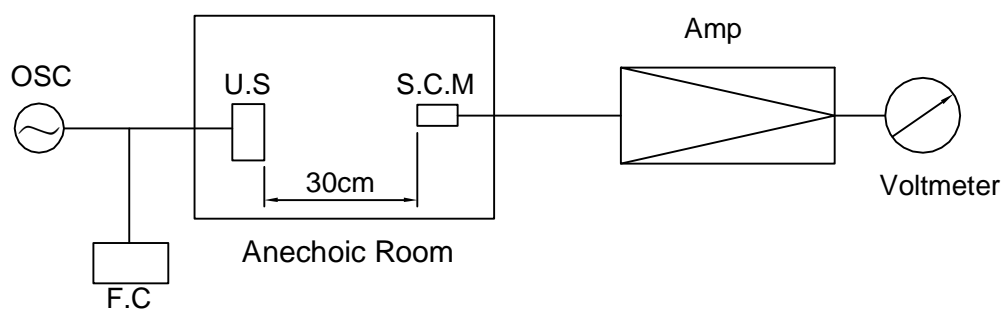
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Directivity in Overall Sensitivity

6.Test circuit



OSC. :Oscillator
F.C. :Frequency Counter
U.S. :Ultrasonic Sensor
S.C.M:Standard Cappacitor Microphone
Amp. :Ampifier

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7. Reliability Test

7.1 High temp.life test

Temperature +85±3 °C
Duration 100hrs

7.2 Low temp.life test

Temperature -40±3 °C
Duration 100hrs

7.3 Heat Cycle Test

Temperature +85±3 °C 1hour
-40±3 °C 1hour
Cycles 10cycles

7.4 Humidity Test

Temperature +60±2 °C
Relative Humidity 90~95%
Duration 100hrs

Tests above should be measured after leaving normal temperature for 24hrs.

7.5 Vibration Test

Vibration Frequency 10~55Hz
Sweep Period 1min
Amplitude(peak to peak) 1.5mm
Direction 3(x.y&z)
Time 2hours/direction

7.6 Shock test

Acceleration sine 100G
Direction 3directions
Shock time 3 time/directions

7.7 Drop test

Height 1m on concrete floor
Times 2times

7.8 Connector soldering check:

Immersing terminal up to 1mm below base in soldering bath at 260 °C 10 seconds

Notice:

The variation of the S.P.L or the sensitivity at 40KHz is within 3dB compared with initial figures at 25 °C in 24 hours after above test condition.

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8. Caution

8.1 Limitation of Applications

Please contact us before using our product for the applications listed below which require especially high reliability for the prevention of defects which might directly cause damage to the third party's life, body or property.

- 1) Aircraft equipment
- 2) Aerospace equipment
- 3) Undersea equipment
- 4) Power plant control equipment
- 5) Medical equipment
- 6) Transportation equipment (vehicles, train, ships, etc.)
- 7) Traffic signal equipment
- 8) Disaster prevention/crime prevention equipment
- 9) Data-processing equipment
- 10) Application of similar complexity and/or reliability requirement to the applications listed in the above

8.2 Fail -safe

Be sure to provide an appropriate fail-safe function on your product to prevent a second damage

that may be caused by the abnormal function or the failure of our product

9. Caution in use

- 1) Please avoid applying an excessive stress to the transducer because it might be damaged.
- 2) The transducer may generate surge voltage by mechanical or thermal shock. Care should be taken to protect from it in designing your application circuit.
- 3) Please do not applying DC voltage to the transducer.
- 4) Please do not use the transducer in water.
- 5) The piece of sensor may be damaged by force pressure from back of sensor.
- 6) Please do not use the sensor without painting on the surface.
- 7) Please well evaluate the painting and electrical characteristic for your coating.

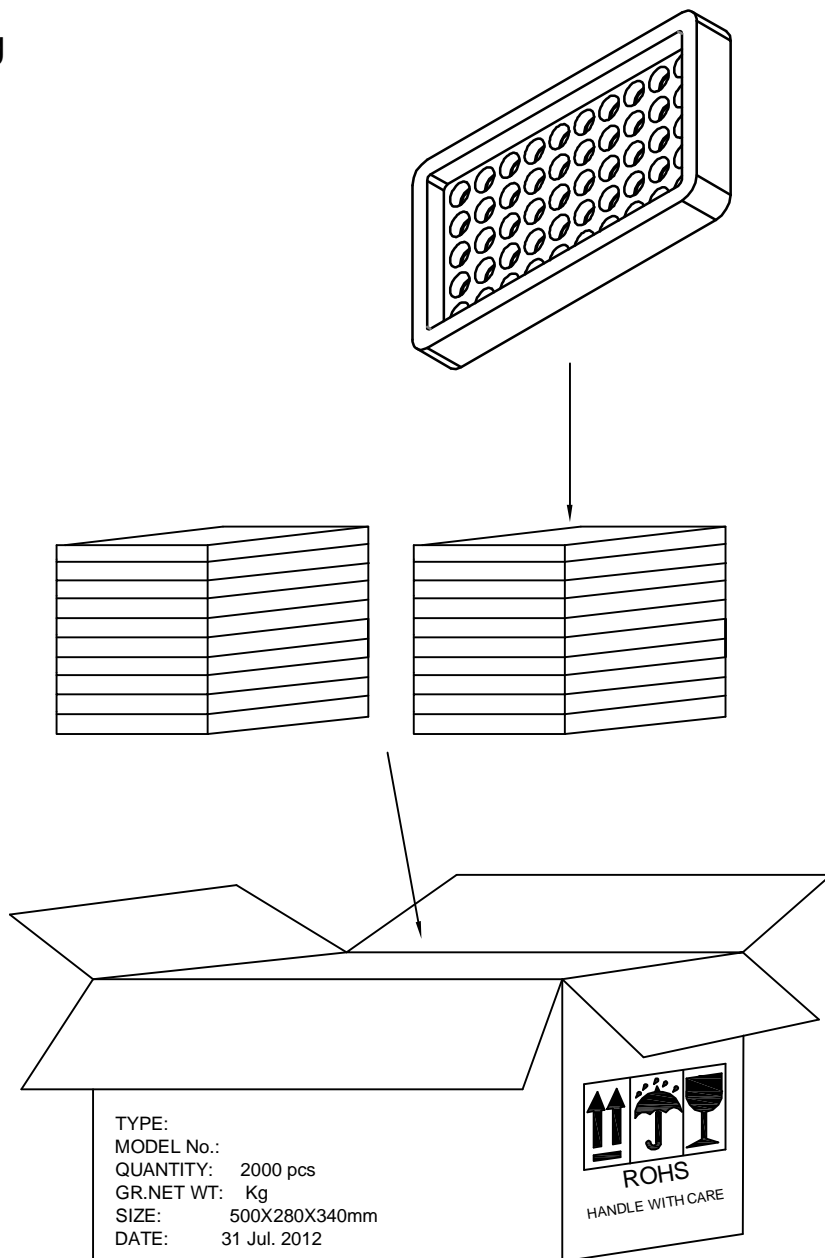
10. Note

- 1) Please make sure that your product has been evaluated in view of your specifications with our product being mounted to your product.
- 2) You are requested not to use our product deviating from the agreed specifications.
- 3) We consider it not to appropriate to include any terms and conditions with regard to the business transaction in the product specifications, drawings or other technical documents. Therefore, of your technical documents as above include such terms and conditions such as warranty clause, product liability clause, or intellectual property infringement liability clause, they will be deemed to be invalid

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11.Packing



- 1)50 pcs/tray
- 2)40 trays/carton
- 3)2000 pcs/carton in total
- 4)carton size: 500X280X340m m

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12. History change record

[illegible]

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