



SPECIFICATION FOR ULTRASONIC SENSOR

TOTAL PAGE

09

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ROHS

Customer		Model Name	BPU1040T/ROPBH07
Customer P/N		Product No.	100105
Date	08. Jun. 2012	Issue No.	BS/TEU01.331B
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Approval:

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- 2.Features
- 3.Technical terms
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- 5.Beam Pattern
- 6.Test Circuit
- 7.Reliability Test
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- 10.Note
- 11.Packing
- 12.History change record

Drawn by	Checked by	Approved by	Customer approved
倪雪晴	邹东平	李红元	

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BPU1040T/ROPBH07



1.Applications

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

2.Features

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

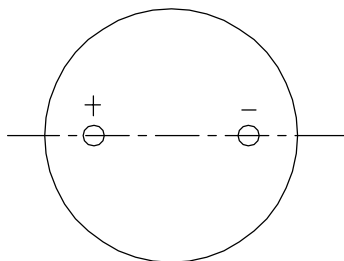
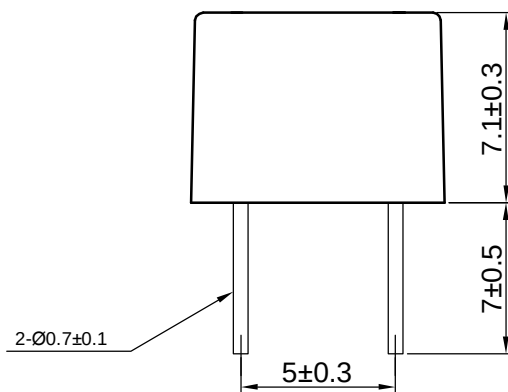
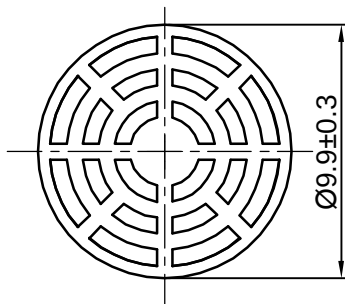
3.Technical terms

No.	Item	Unit	Specification	
1.	Type		BPU1040TOPBH07	BPU1040ROPBH07
2.	Construction		Open Structure	
3.	Using Method		Transmitter	Receiver
4.	Frequency	KHz	40.1±1K Hz	38.3±1K Hz
5.	Sound Pressure Level	dB	min.115dB (10V/30cm)	---
6.	Sensitivity	dB	---	min. -65dB /V/ μbar
7.	Capacitance	pF	2500pF±25% at 1KHz	
8.	Directivity	°	50deg	
9.	Operating Tem.Range	℃	-35 to +85 ℃	
10.	Storage Tem.Range	℃	-35 to +85 ℃	
11.	Detectable Range	m	0.7...6m	
12.	Allowable Input Voltage	Vp-p	60Vp-p	
13.	Housing Material		MPPO	

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	B	2012.06.08	倪雪晴	Drawn by:	倪雪晴	
	A	2010.12.15	倪雪晴	Checked by:	邹东平	Ultrasonic Sensor
	Rev.	Date	Drawn	Note	Approved by: 李红元	
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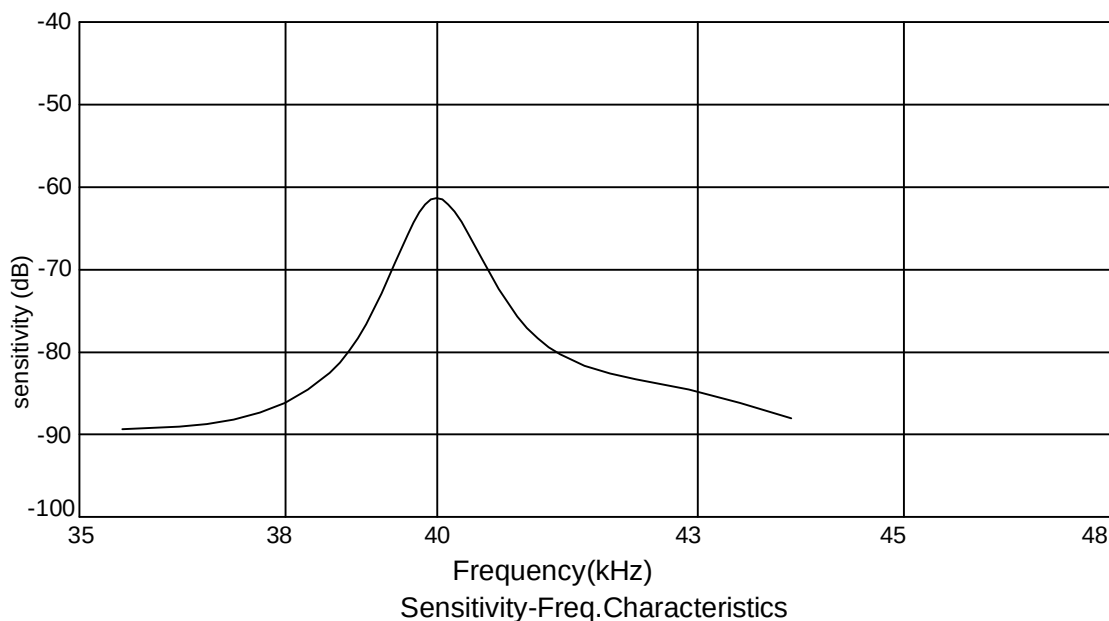
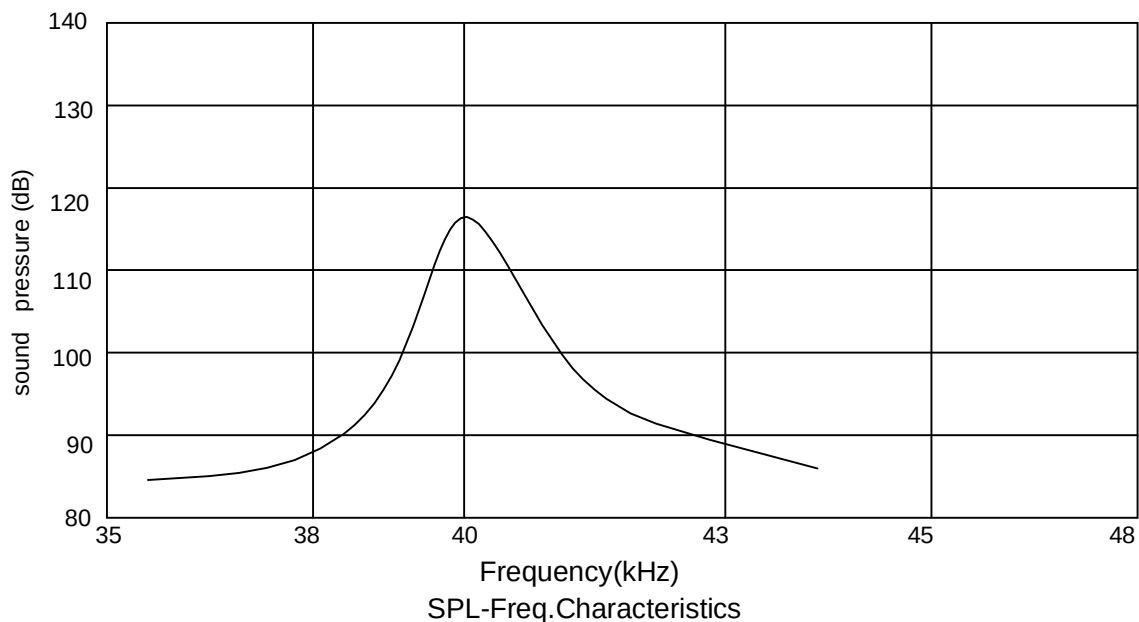
4.Drawing



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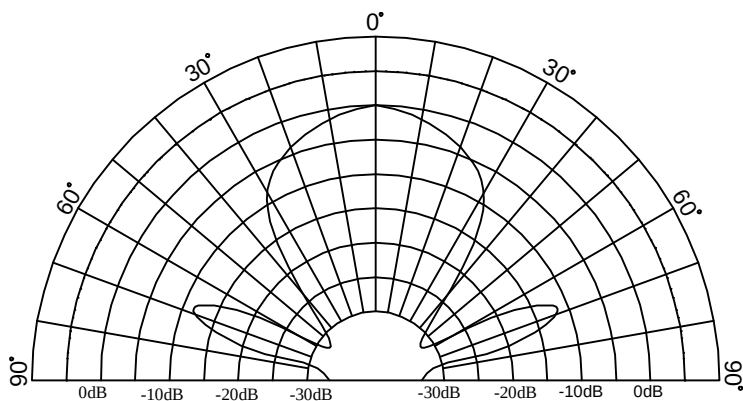
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5. Beam Pattern



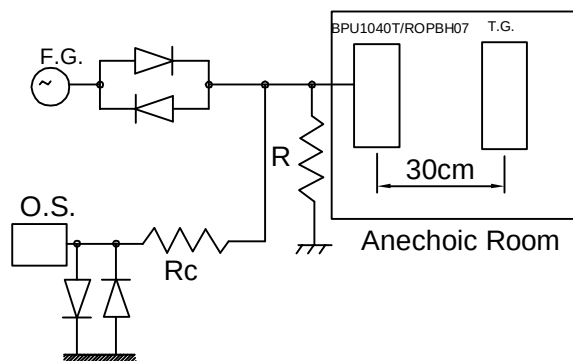
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Directivity in Overall Sensitivity

6.Test circuit



R: 3.9K Ω Rc=1k Ω

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±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

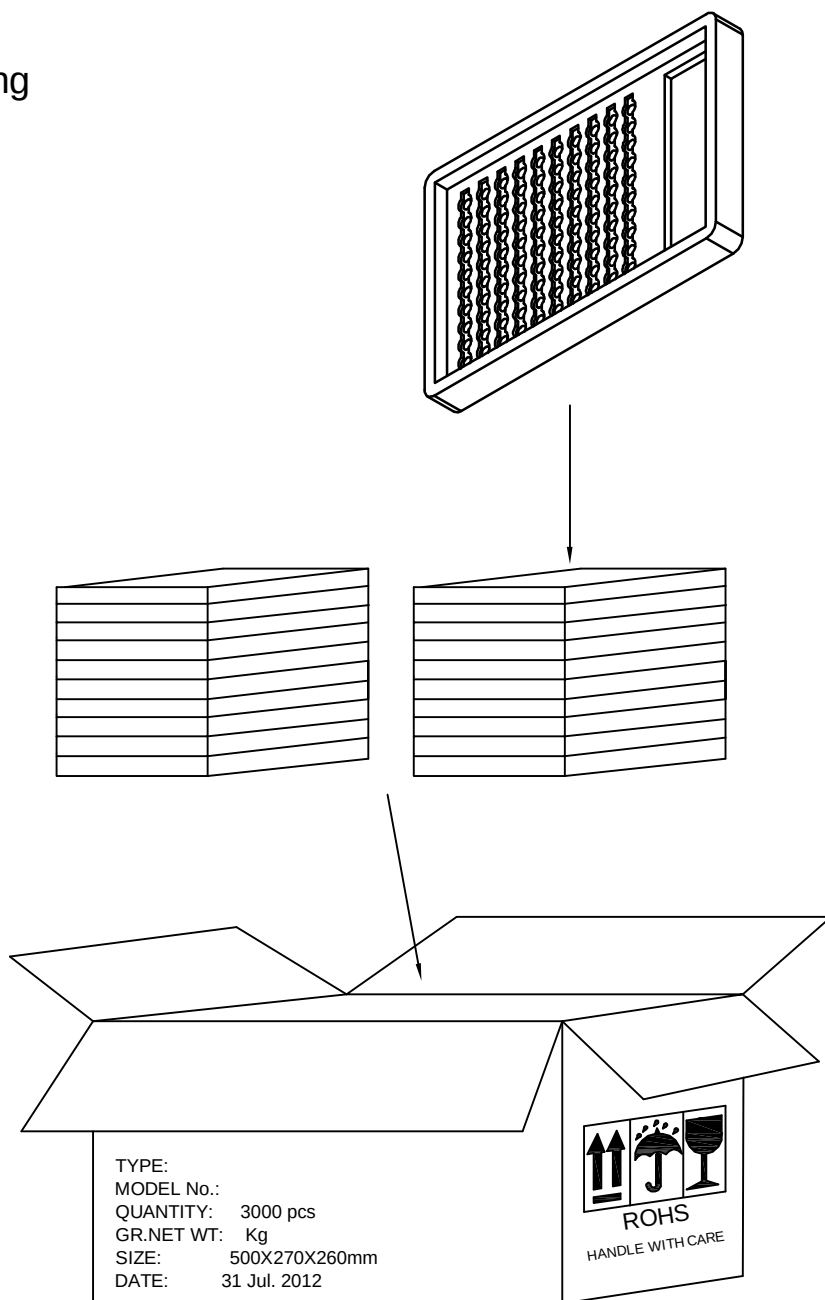
technical documents as above include such terms and conditions such as warranty clause, product

liability clause, or intellectual property infringement liability clause, they will be deemed to be invalid

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11.Packing



- 1)100 pcs/tray
- 2)30 trays/carton
- 3)3000 pcs/carton in total
- 4)carton size: 500X270X260m m

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12. History change record

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