Content

Revision

The first version.

1 Applications

Mainly used for ultrasonic ranging, smoke detector, parking system, robot R&D, liquid level measurement and so on.

2 Features

2.1 Receiver: “R” mark on housing
2.2 Compact and light weight
2.3 High sensitivity
2.4 Less power consumption
2.5 High reliability

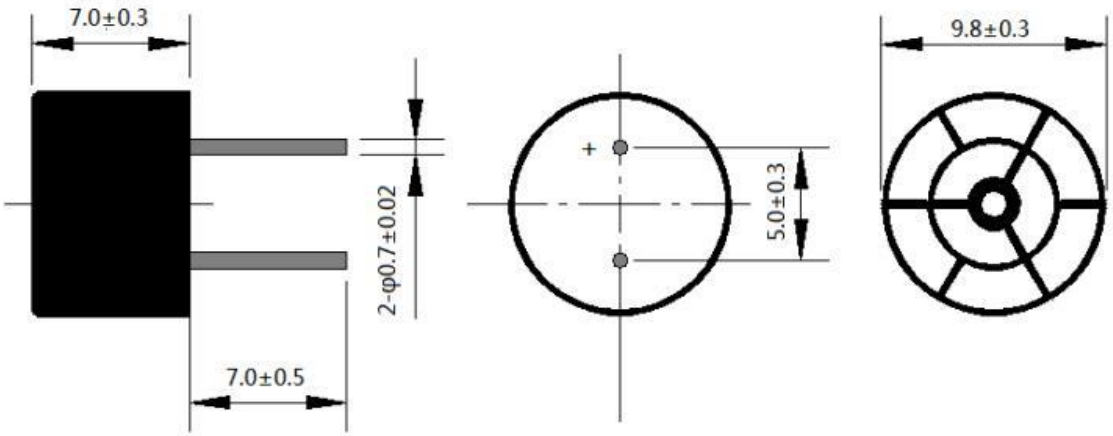
RoHS

3 Technical Specifications

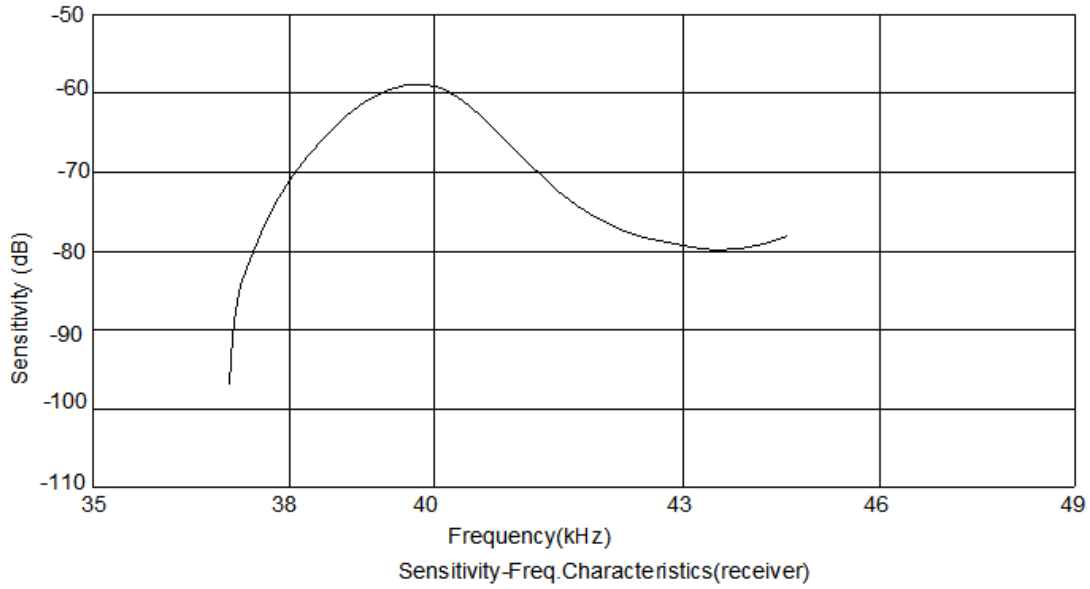
Item	Value
Using method	Receiver
Nominal Frequency	40±1.0KHZ
Sensitivity	≥-75dBV/μMbar
Directivity	80deg
Capacitance	2500±25%@1KHz
Detectable range	0.2~15m
Operating Temperature	-20~ +80℃
Housing material	Plastic
Weight	0.58g

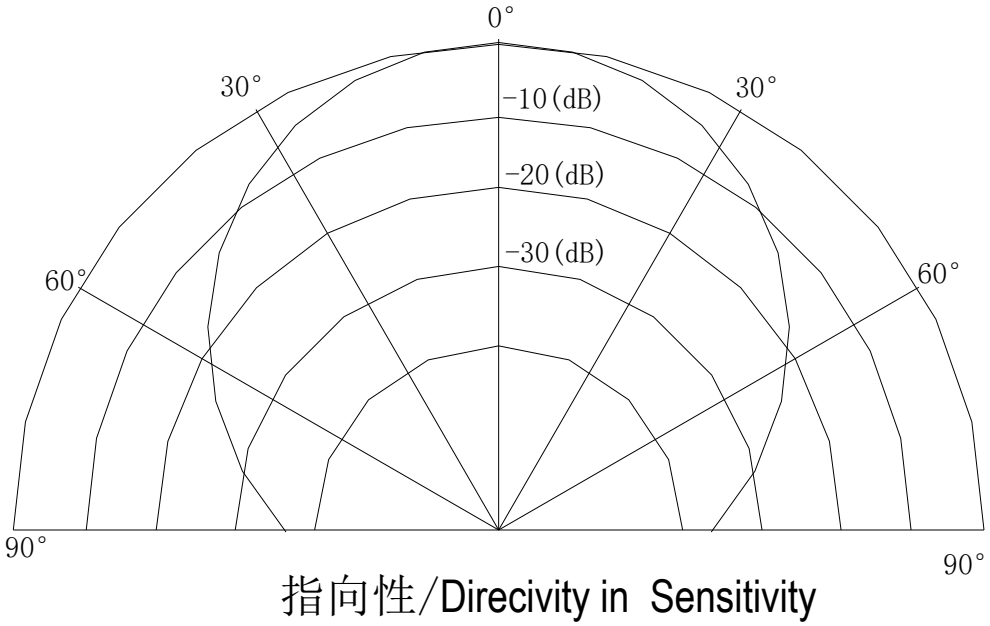
4 Mechanical Drawing

units:mm



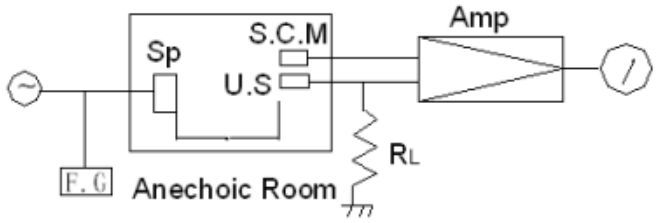
5 Beam Pattern





6 Test Circuit

Receiver



RL: 3.9KΩ
U.S :Ultrasonic Sensor
S.C.M:Standard Cappacitor Microphone
Amp. :Ampifier
OSC. :Oscillator
Sp :Tweeter
F.C :Frequency Counter

7 Reliability Test

7.1	High Temp. Life Test	
	Temperature	+85±3℃
	Duration	100 hrs
7.2	Low Temp. Life Test	
	Temperature	-40±3℃
	Duration	100 hrs
7.3	Heat Cycle Test	
	Temperature	+85±3℃ 1hour
		-40±3℃ 1hour
	Cycles	10 cycles
7.4	Humidity Test	
	Temperature	+60±2℃
	Relative Humidity	90～95%
	Duration	100 hrs
7.5	Vibration Test	
	Vibration Frequency	10～55Hz
	Sweep Period	1.5 min
	Direction	x,y&z
	Time	2 hours/direction
7.6	Shock Test	
	Acceleration	sine 100G
	Direction	x,y&z
	Shock Time	3 times/direction
7.7	Drop Test	
	Height	1 m on concrete floor
	Times	2 times

7.8 Connector Soldering Check:
Immersing terminal up to 1mm below in soldering bath at 260℃ 10 Seconds.

Notice:

The variation of the sensitivity at 40KHz is within 2dB compared with initial figures at 25℃ in 24 hours after above test conditions.

8 Caution in Use

8.1 Please avoid applying an excessive stress to the transducer because it might be damaged.

8.2 The transducer may generate surge voltage by mechanical or thermal shock. Care should be taken to protect from it in designing your application circuit.

8.3 Please do not apply DC voltage to the transducer.

8.4 Please do not use the transducer in water.

8.5 The piece of sensor may be damaged by force pressure from back of sensor.

8.6 Please well evaluate the painting and electrical characteristic for your coating.

8.7 When used to distinguish between positive and negative.

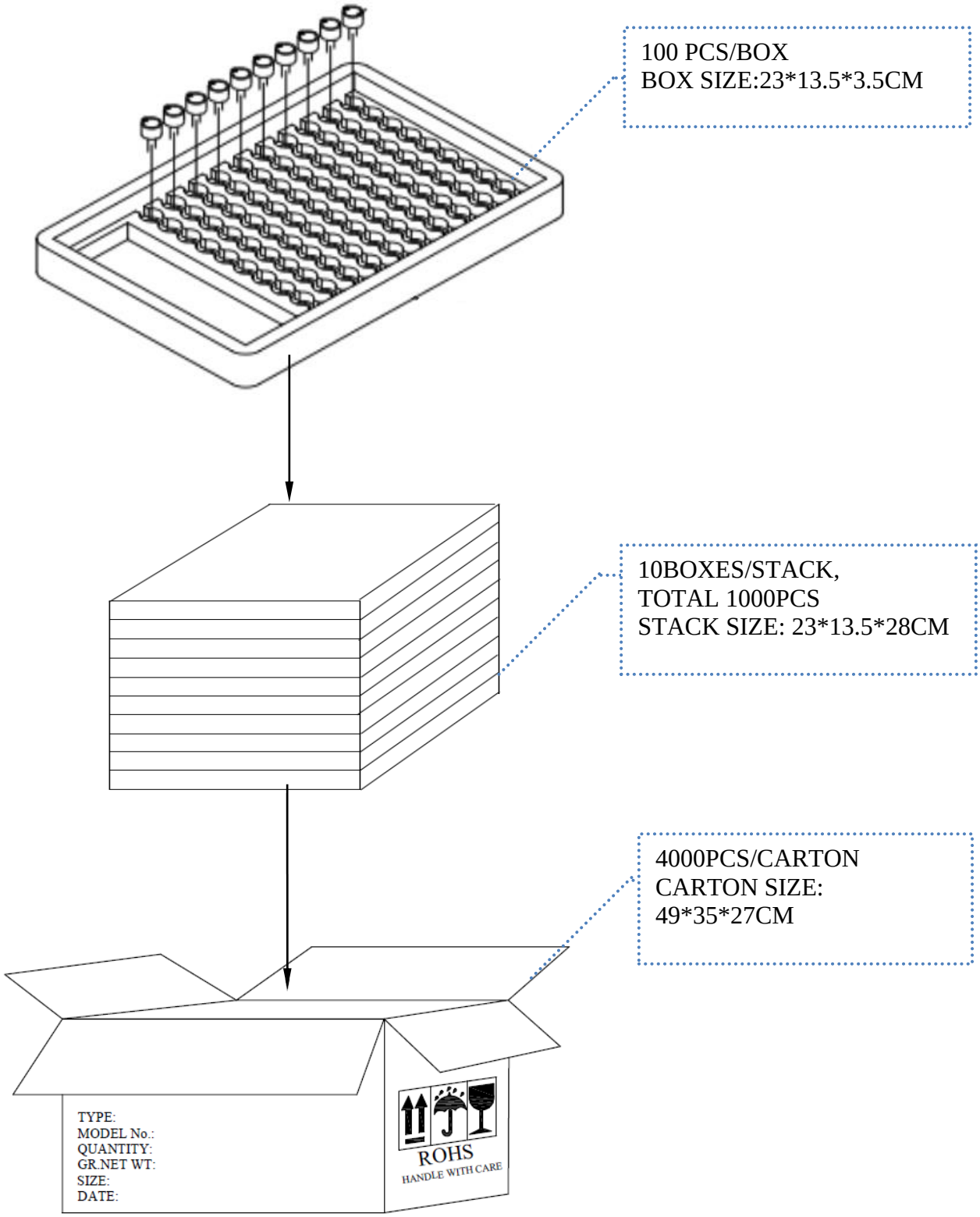
9 Note

9.1 Please make sure that your product has been evaluated in view of your specifications with our product being mounted to your product.

9.2 You are requested not to use our product deviating from the agreed specifications.

9.3 We consider it not appropriate to include any terms and conditions with regard to the business transaction in the product specifications, drawings or other technical documents.

10 Packaging Details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SIZE:
DATE:
ROHS
HANDLE WITH CARE