

# 錫麟企業有限公司 Sencera Co. Ltd.

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## AIR ULTRASONIC TRANSDUCER

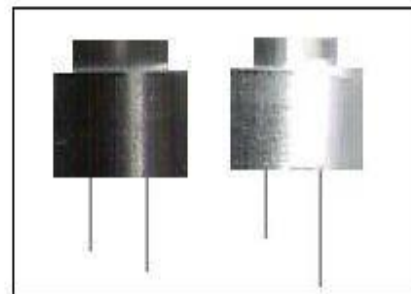
### Enclose type EC4016

#### 1. Features

- High sensitivity, high sound pressure level, uniform in quality
- Excellent vibration , shock and water resistance.
- Big operation range.

#### 2. Applications

- Remote control of electronic appliance.
- Back sensor, Back meter for car use.
- Level meter
- Switch for electronic application.



#### 3. Ratings

<b>Transceiver</b>	
<b>Center Frequency</b>	40.0 ±1.0Khz
<b>Bandwidth (-6dB) F.O.M.</b>	1.2Khz
<b>Transmitting sound Pressure Level</b> at resonant frequency;0dB re 0.0002 μ bar per 10Vrms at 30cm	102dB min.
<b>Receiving Sensitivity</b> at resonant frequency 0dB=1, volt/ μ bar	-85dB min.
<b>Nominal Impedance ( Ohm )</b>	850
<b>Ringing</b> (measuring with rubber holder)	1.5ms max.
<b>Capacitance (at 1KHz in LCR meter) ±20%</b>	2000pF
<b>Max.Driving Voltage ( pulse width 0.5ms interval 50ms )</b>	150Vp-p
<b>Total Beam Angle at -6dB</b>	85 ° ± 12°
<b>Operation Temperature</b>	-30 to 80°C
<b>Storage Temperature</b>	-40 to 85°C

#### 4. Part number meaning:

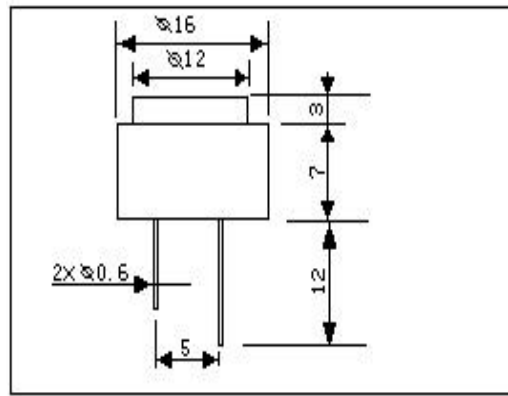
EC      40      16  
(1)      (2)      (3)

(1) EC: Enclose type (Water resistance) and Combine transmittre & receiver in one unit.

(2) 40: Center Frequency. (KHz)

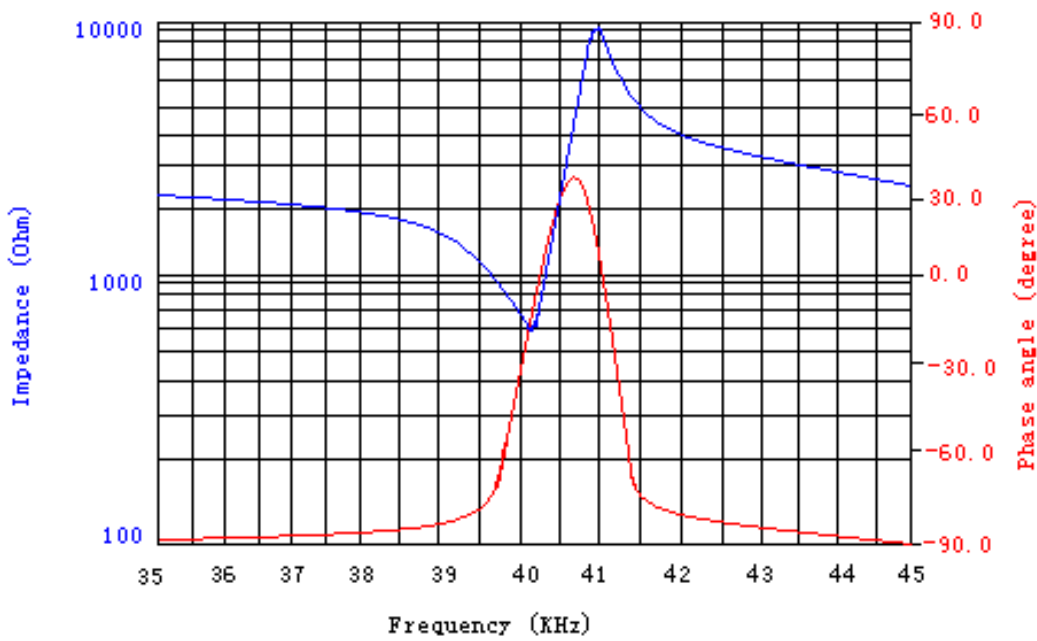
(3) 16: Transducer diameter. (mm)

### 5.Dimension:

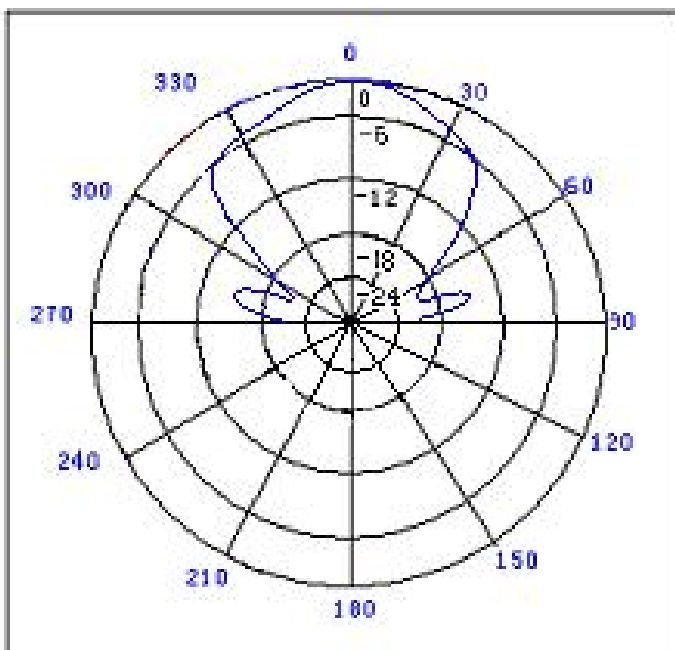


### 6.Impedance/Phase Angle vs.Frequency

Tested under 1Vrms Oscillation Level

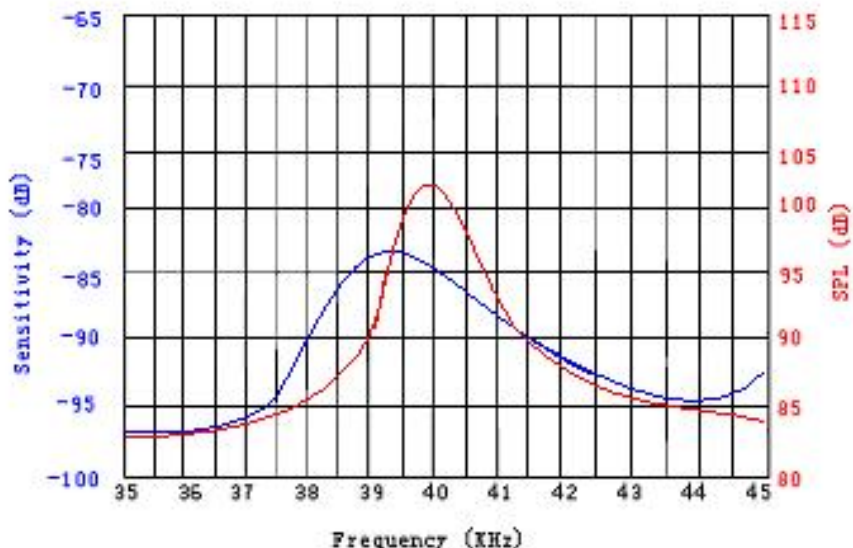


### 7.Beam Angle:Tested at 40.0Khz frequency

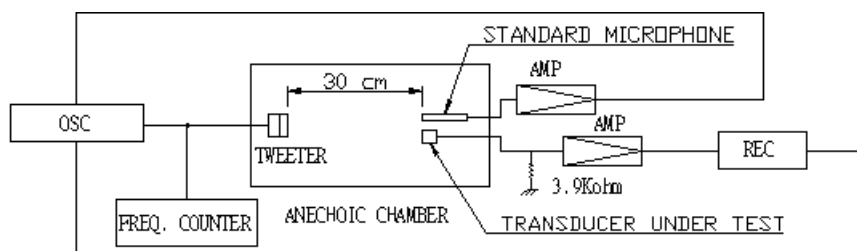


## 8.Sensitivity/Sound Pressure Level

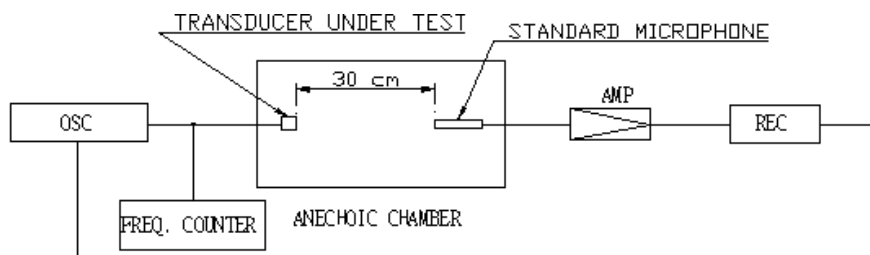
Tested under 10Vrms@30cm



## 9.Test Circuit Diagram for Receiving



## 10.Test Circuit Diagram for Transmitting



## 11.Environmental Characteristics

Item	Conditions	Variation of Sensitivity
Temperature Characteristics	-20~70°C	Within 10 dB
Humidity	40±2°C, 90 %RH, 2Hrs	Within 4 dB
Shock	50G impact Directions : 3 perpendicular directions Times : 3 times	Within 4 dB
Vibration	Directions : 3 perpendicular Directions Times : 1000 times Single harmonic vibration a) Amplitude: 1.5mm b) Sweep Frequency : 10-50-10Hz with interval of 1 minute	Within 4 dB

