錫麟企業有限公司 Sencera Co. Ltd.

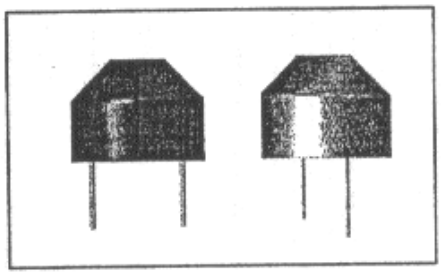
Tel:886-2-27046595 Fax:886-2-27041279 Email:justinel@ms14.hinet.net
9F-5, No. 26, Sec. 3, Jen-Ai road, Taipei, Taiwan, ROC. www.sensorelement.com

AIR ULTRASONIC TRANSDUCER

Enclose type EC4018

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

Transceiver Center Frequency Bandwidt (-6dB) F.O.M. Transmitting sound Pressure Level at resonant frequency;0dB re 0.0002 μ bar per 10Vrms at 30cm	 40.0 ±1.0Khz 1.2Khz 106dB min.
Receiving Sensitivity at resonant frequency 0dB=1, volt/ μ bar	-74dB min.
Nominal Impedance (Ohm)	850
Ringing (measuring with rubber holder)	1.5ms max.
Capacitance (at 1KHz in LCR meter) ±20%	2200pF
Max.Driving Voltage (pulse width 0.5ms interval 50ms)	150Vp-p
Total Beam Angle at -6dB	120 ° ±12°
Operation Temperature	-30 to 80℃
Storage Temperature	-40 to 85℃

4. Part number meaning:

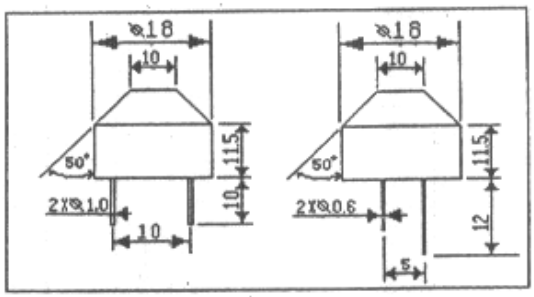
EC	40	18
(1)	(2)	(3)

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

(2) 40: Center Frequency. (KHz)

(3) 16: Transducer diameter. (mm)

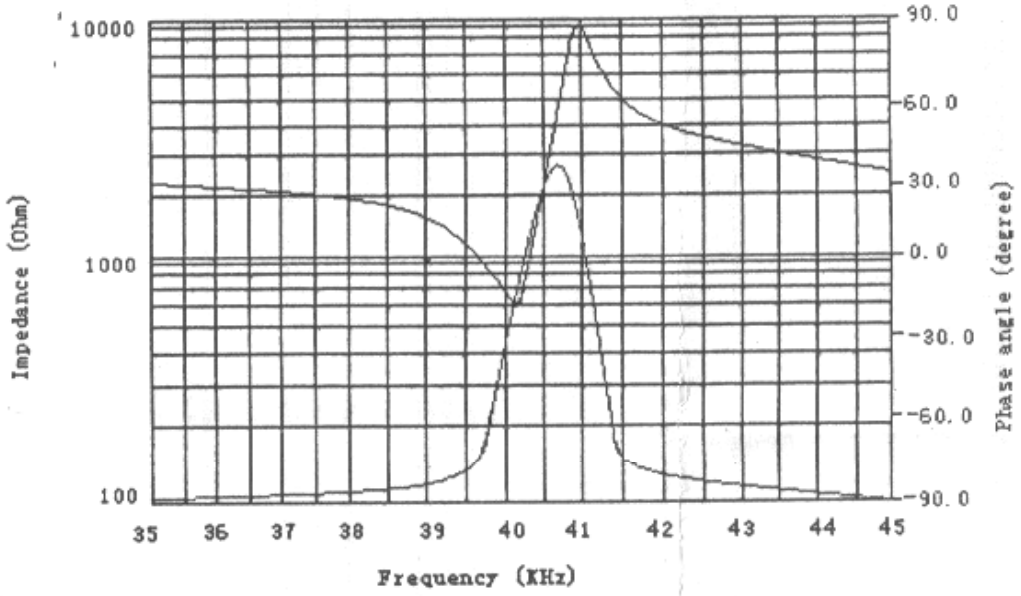
5.Dimension:



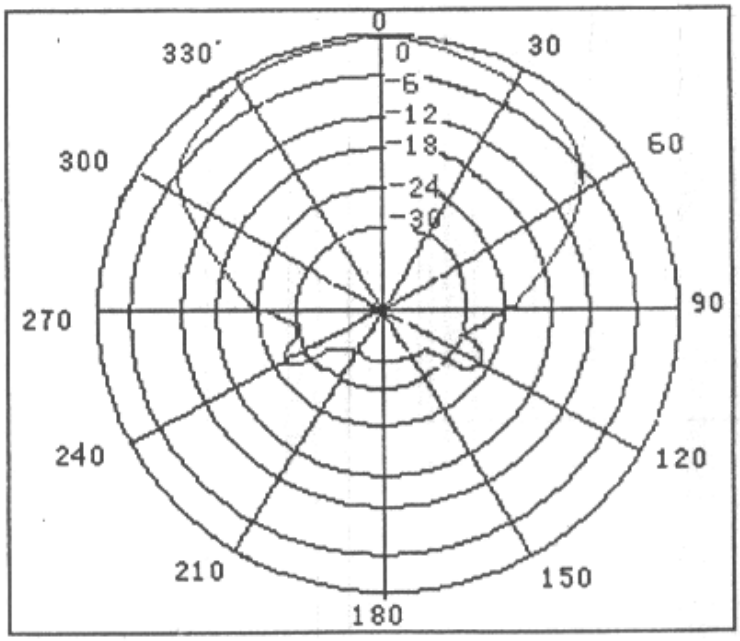
Pitch 10mm Pitch 5 mm

6.Impedance/Phase Angle vs.Frequency

Tested under 1Vrms Oscillation Level

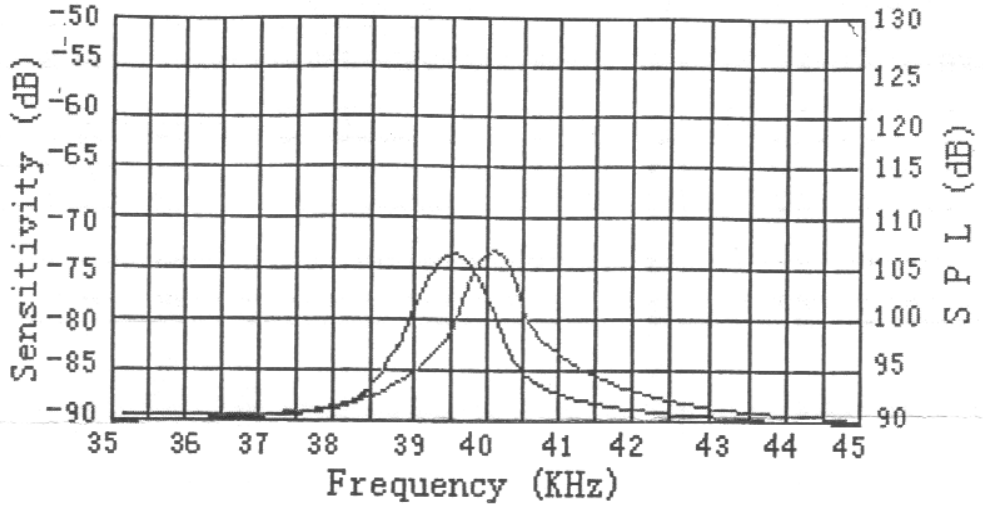


7.Beam Angle:Tested at 40.0Khz frequency

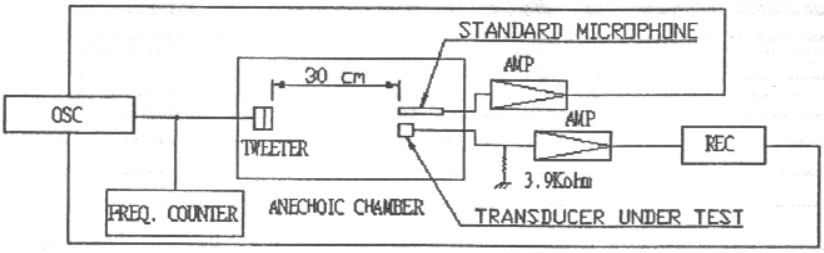


8.Sensitivity/Sound Pressure Level

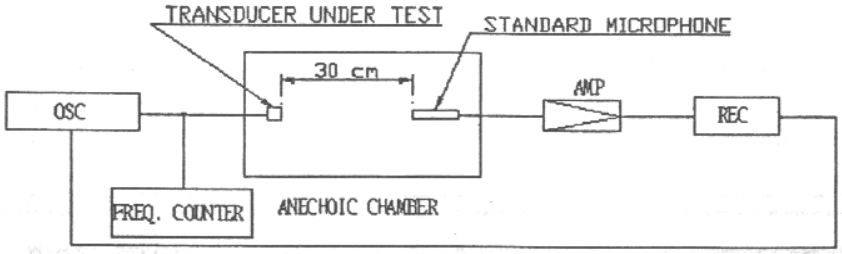
Tested under 10Vrms@30cm



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