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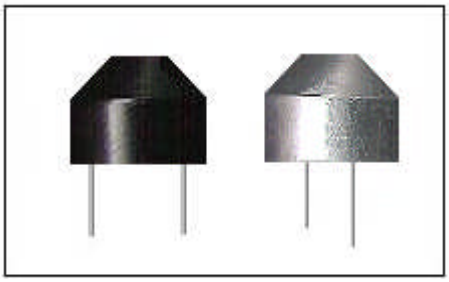
AIR ULTRASONIC TRANSDUCER

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	40.0 ±1.0Khz
Bandwidt（-6dB） F.O.M.	1.2Khz
Transmitting sound Pressure Level at resonant frequency;0dB re 0.0002 μ bar per 10Vrms at 30cm	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:

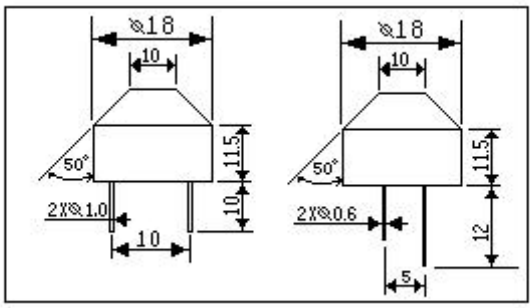
EC	40	18
(1)	(2)	(3)

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

(2) 40: Center Frequency. (KHz)

(3) 16: Transducer diameter. (mm)

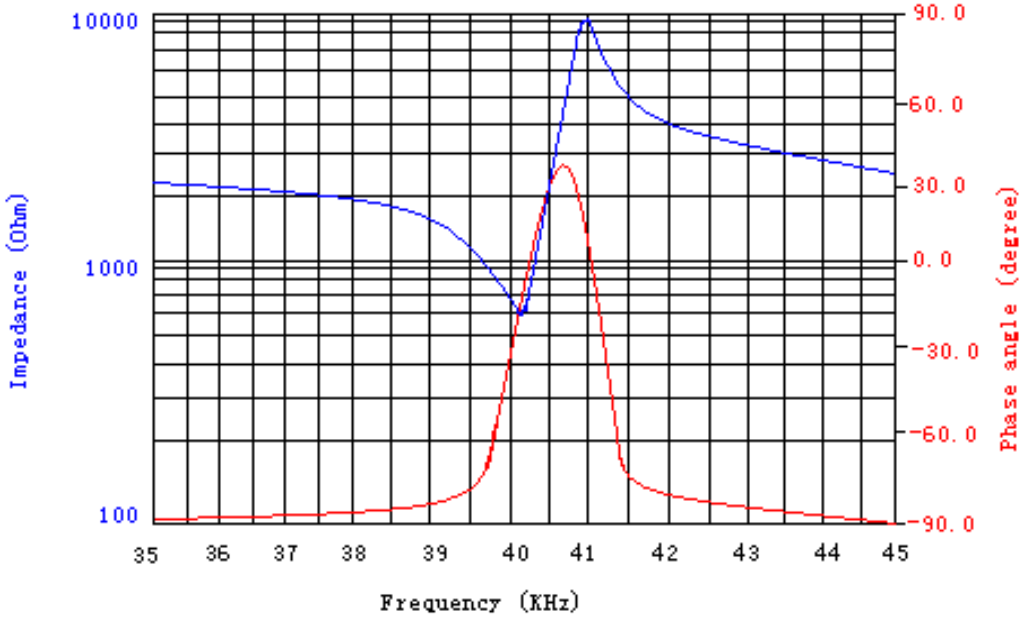
5.Dimension:



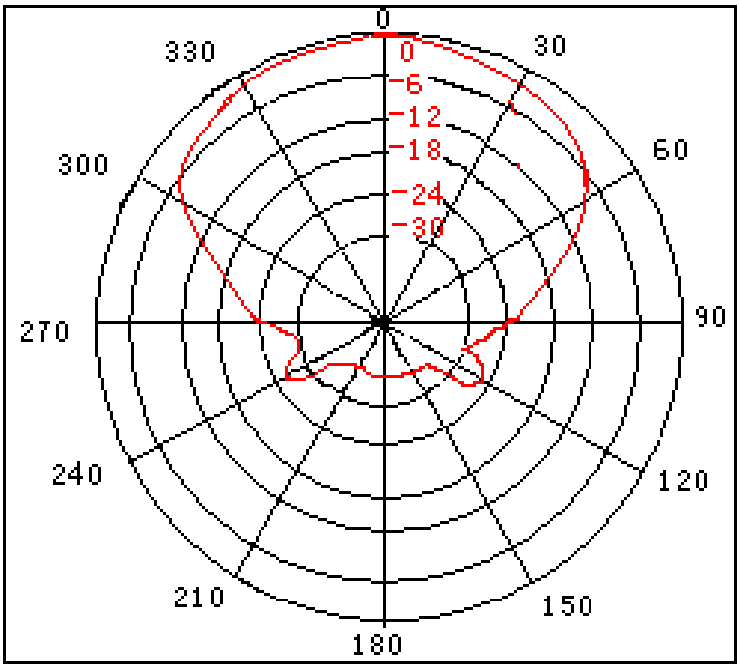
Pitch 10mm Pitch 5 mm

6.Impedance/Phase Angle vs.Frequency

Tested under 1Vrms Oscillation Level

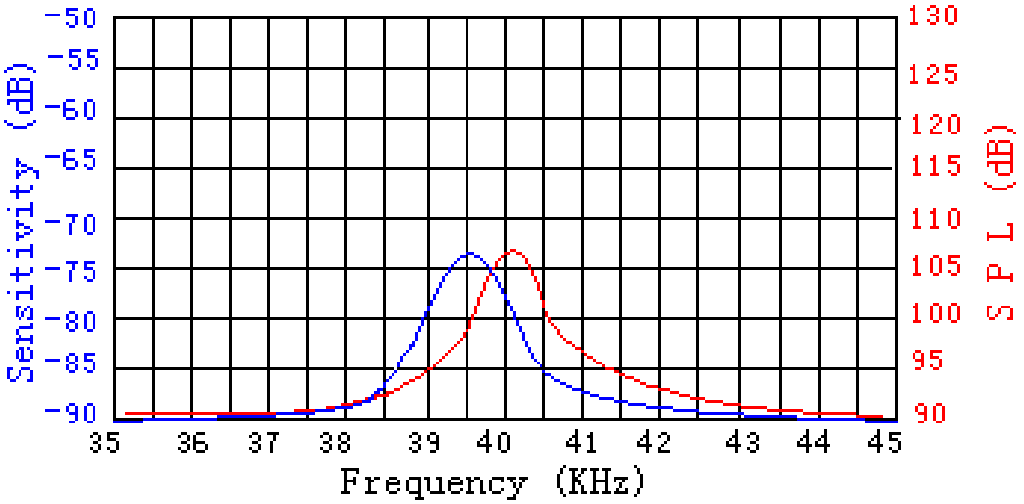


7.Beam Angle:Tested at 40.0Khz frequency



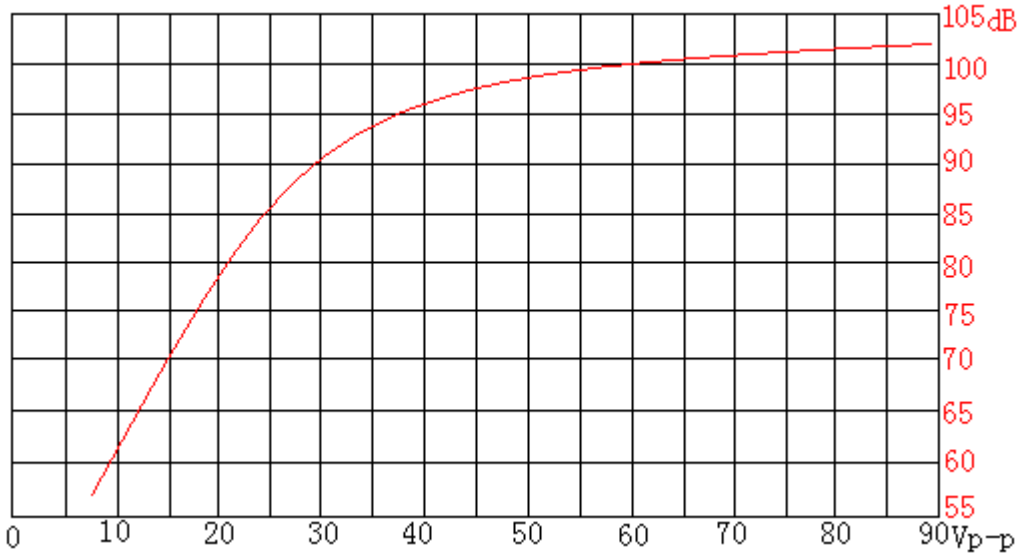
8.Sensitivity/Sound Pressure Level

Tested under 10Vrms@30cm

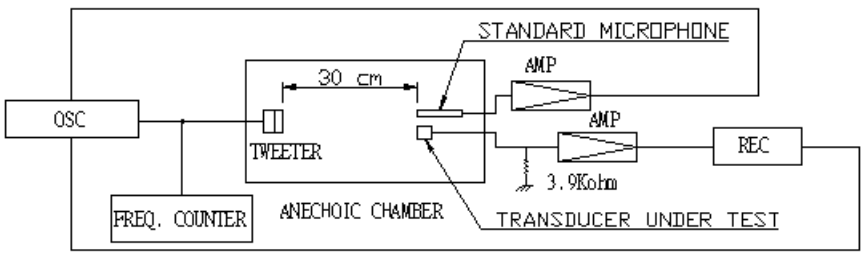


EC4018 input voltage with output dB value curve.

(Test distance is 1m)



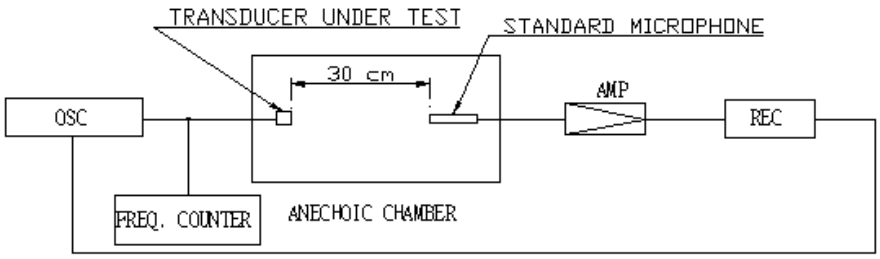
9.Test Circuit Diagram for Receiving



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