

Applications:

This specification covers the water proof type ultrasonic ceramic transducer which are used for ultrasonic ranging and parking sensor of automobile.

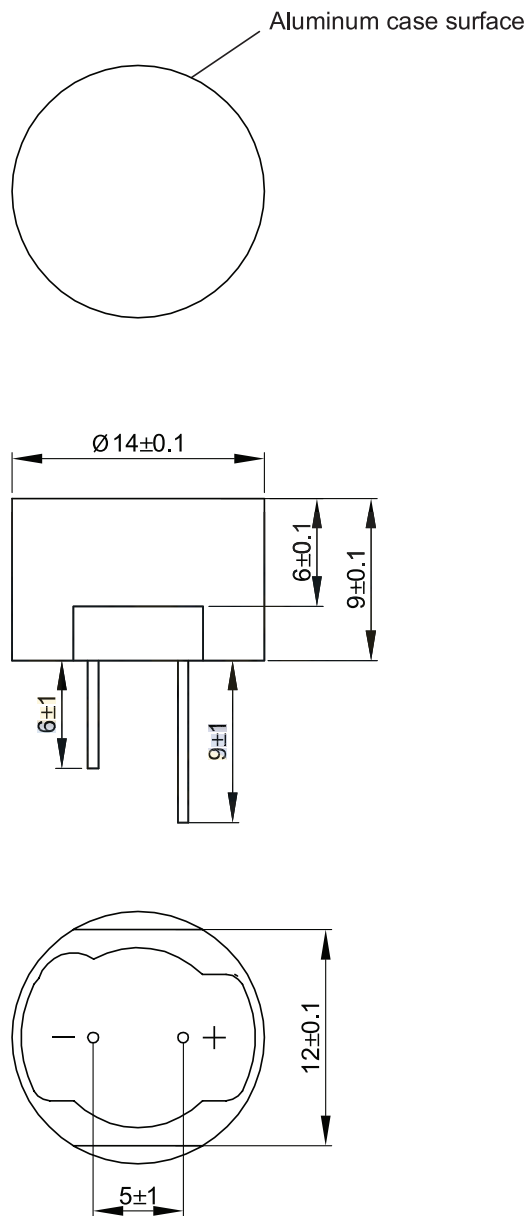
Features:

- Water proof and dual use
- Compact and light weight
- High sensitivity and sound pressure
- Less power consumption
- High reliability

Technical Terms:

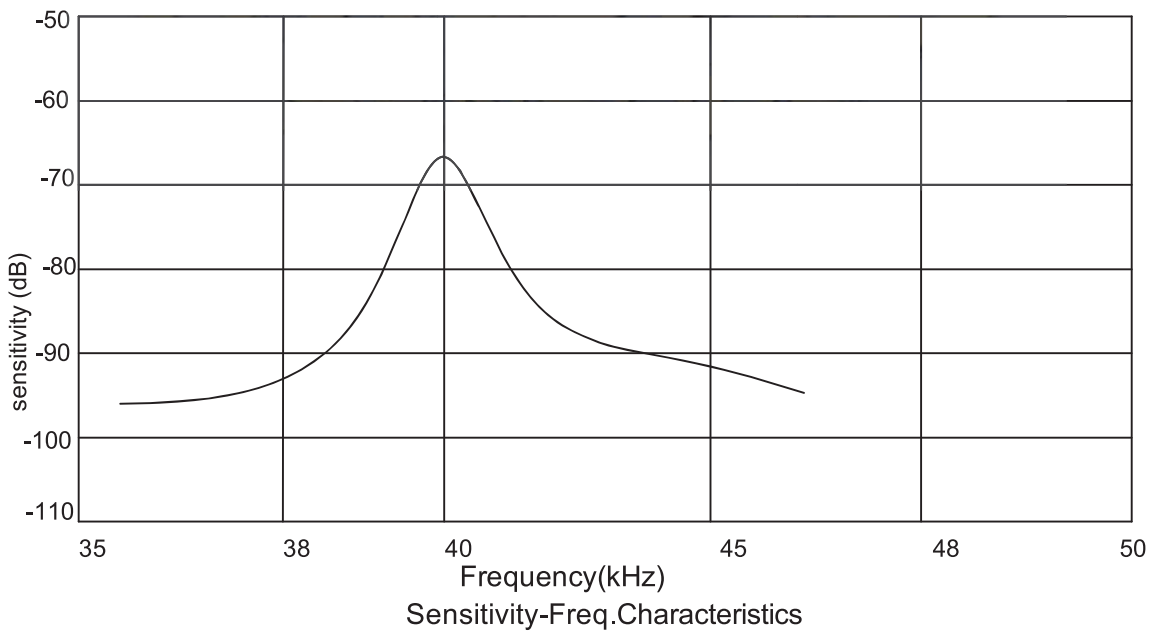
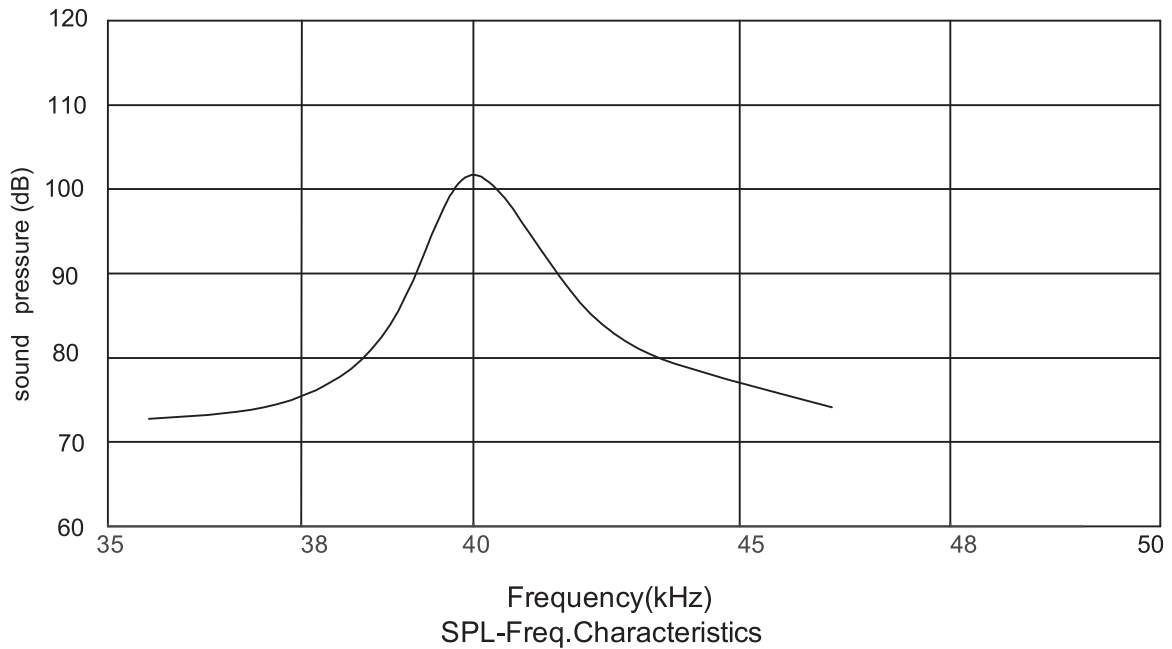
No	Item	Specification
1	Part Number	MCUSD14A40S09RS
2	Construction	Water Proof
3	Using Method	Dual Use
4	Centre Frequency	40 ± 1kHz
5	Sound Pressure Level (dB)	≥90 (30cm/10V rms)
6	Sensitivity (dB)	≥-75dB/V/μbar
7	Beam pattern	110 × 50°
8	Capacitance (pF)	2,500 ± 25% at1kHz
9	Operating Temperature Range	-40°C to 85°C
10	Storage Temperature Range	-40°C to 85°C
11	Allowable Input Voltage (Vp-p)	160V
12	Housing Material	Aluminium

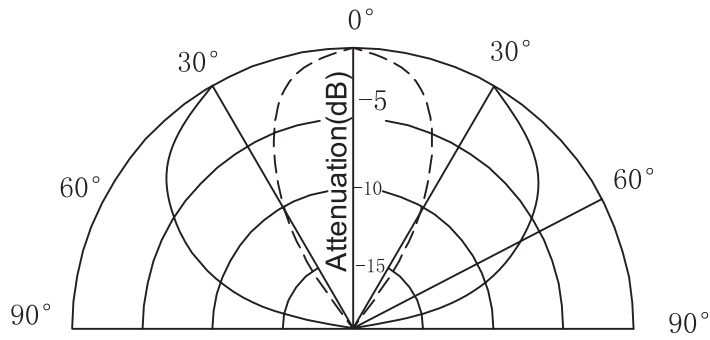
Drawing:



Dimensions : Millimetres

Beam Pattern:

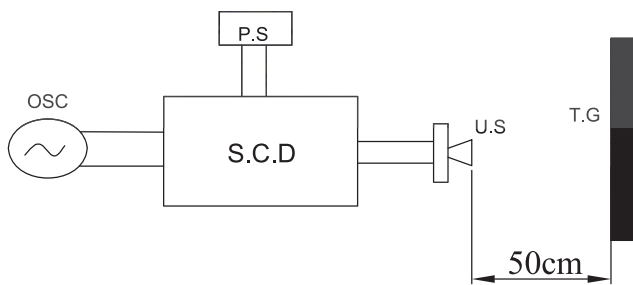




Directivity in Overall Sensitivity

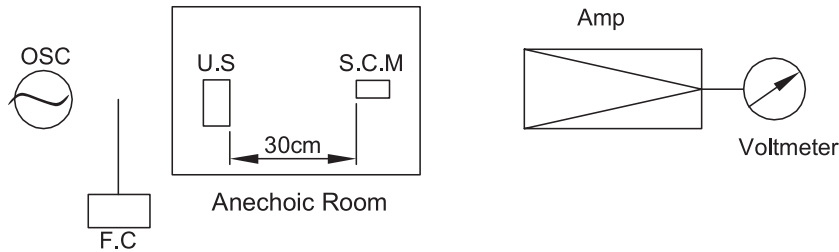
Test Circuit:

Echo & Rest. Resonant Time test circuit



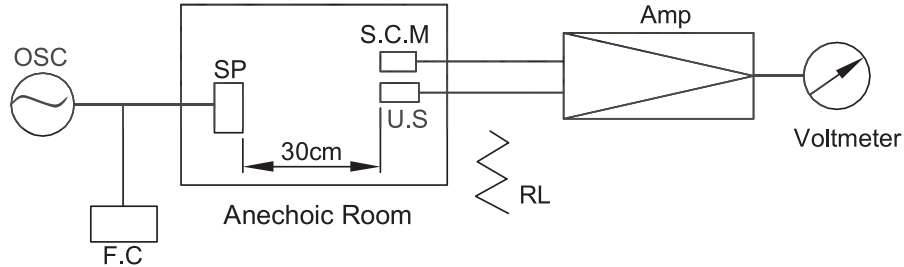
- OSC : Oscillator
- P.S : Power supply
- S.C.D : Special circuit diagram
- U.S : Ultrasonic Sensor
- T.G : Target

S.P.L test circuit



- OSC. : Oscillator
- F.C : Frequency Counter
- U.S : Ultrasonic Sensor
- S.C.M : Standard Capacitor Microphone
- Amp. : Amplifier

sensitivity test circuit



- OSC. : Oscillator
- F.C : Frequency Counter
- U.S : Ultrasonic Sensor
- S.C.M : Standard Capacitor Microphone
- Amp. : Amplifier
- SP : Tweeter
- RL : 3.9kΩ

Part Number Table

Description	Part Number
Transceiver, 40kHz, 14mm, Metal	MCUSD14A40S09RS

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