

# Ultrasonic Sensor Transceiver 40kHz

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## Applications:

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

## Features:

- Open structure and dual use
- Compact and light weight
- High sensitivity and sound pressure
- Less power consumption
- High reliability
- IP Rating: IP 67

## Technical Terms:

| No | Item                           | Specification       |
|----|--------------------------------|---------------------|
| 1  | Part Number                    | MCUSD14A40S09RS-30C |
| 2  | Construction                   | Water Proof         |
| 3  | Using Method                   | Dual Use            |
| 4  | Centre Frequency               | 40 ± 1kHz           |
| 5  | Sound Pressure Level (dB)      | ≥97 (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           |

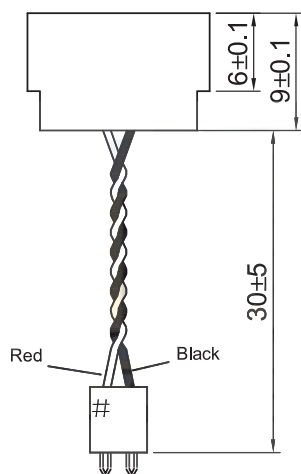
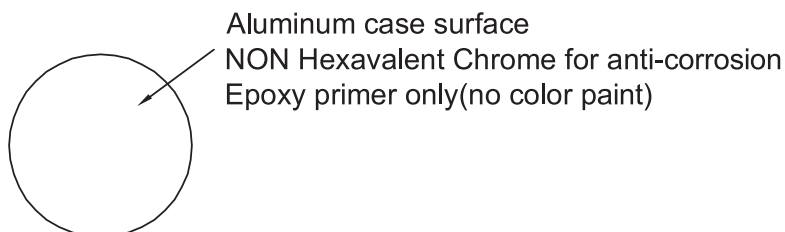
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sg.element14.com/b/multicomp-pro

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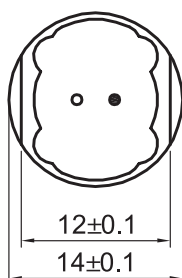
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Drawing:



Lead wire  
AWG30 Red,Black  
connector pitch 2mm

# EIAJ code

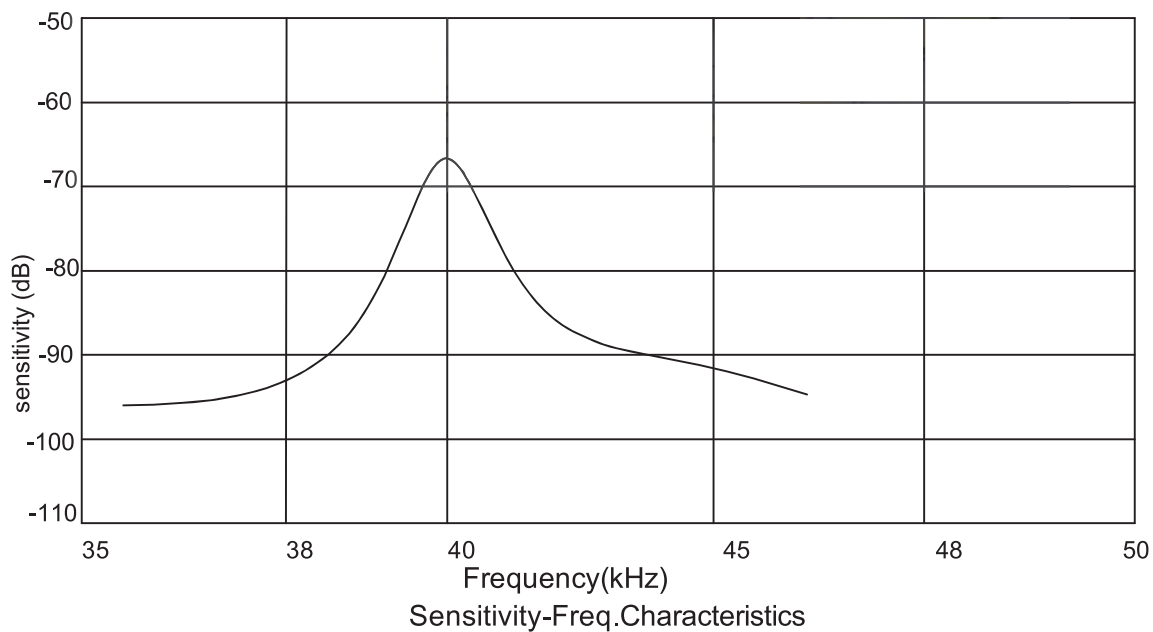
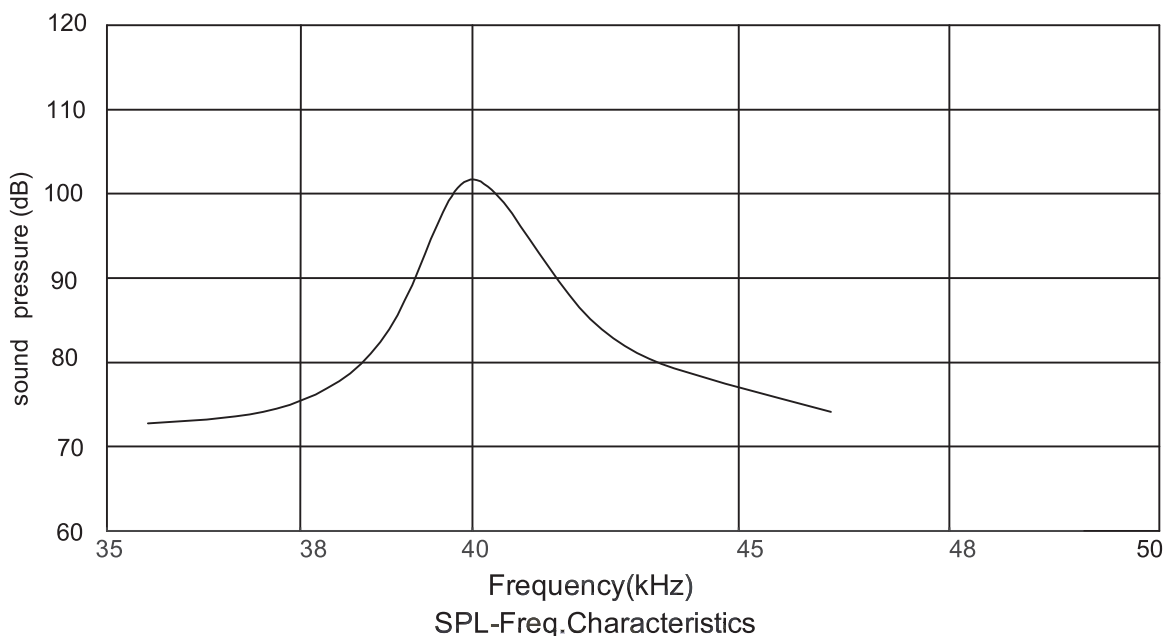


Dimensions : Millimetres

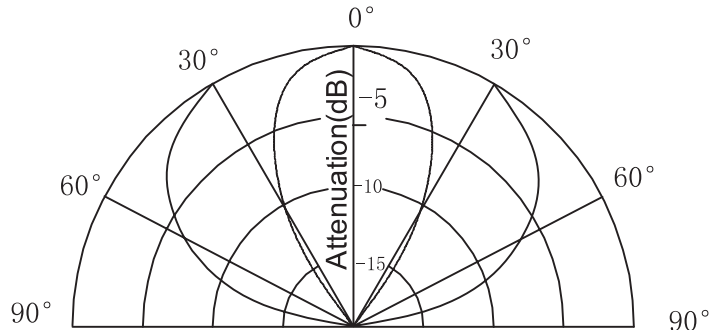
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## Beam Pattern:



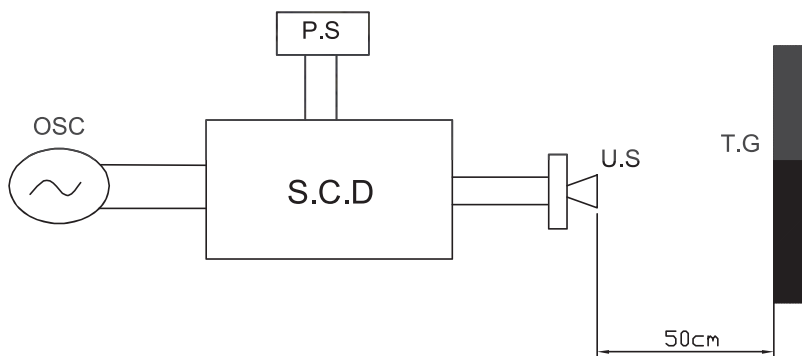
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Directivity in Overall Sensitivity

## Test Circuit:

### Echo&Rest.Resonant Time test circuit

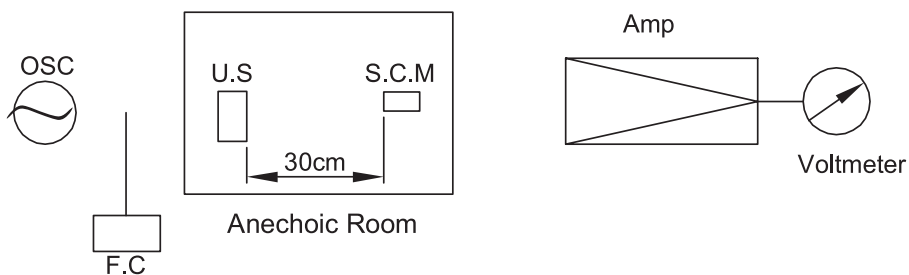


- OSC : Oscillator
- P.S : Power supply
- S.C.D : Special circuit diagram
- U.S : Ultrasonic Sensor
- T.G : Target

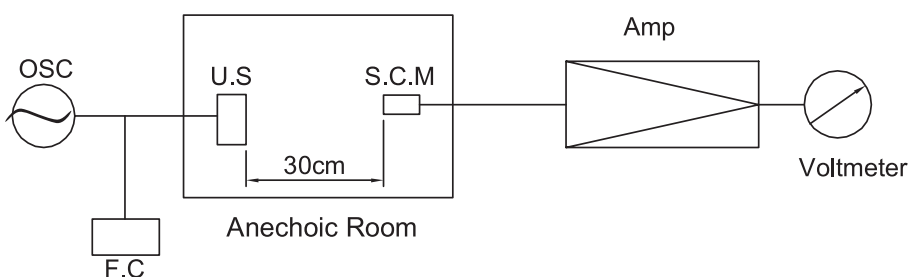
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## S.P.L test circuit



## S.P.L test circuit



### Part Number Table

| Description                     | Part Number         |
|---------------------------------|---------------------|
| Transceiver, 40kHz, 14mm, Metal | MCUSD14A40S09RS-30C |

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