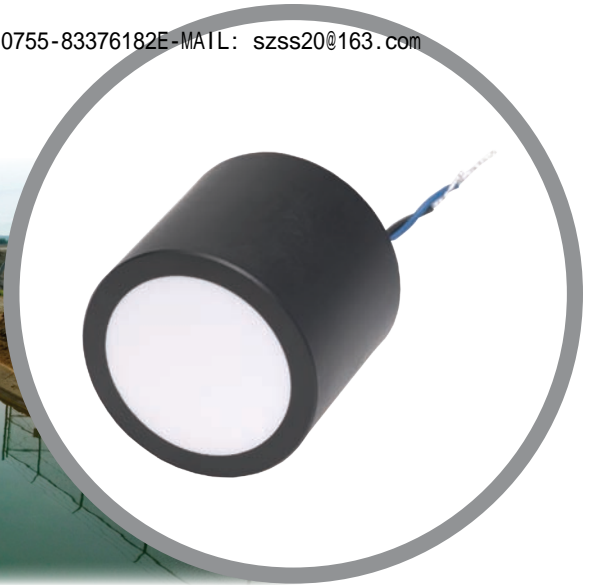


# AT50

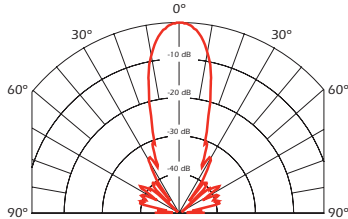


## SPECIFICATIONS

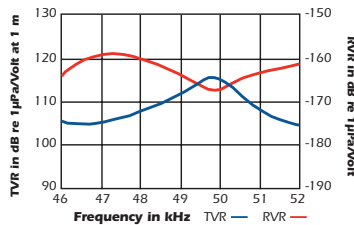
- Best Operating Frequency:** 50 kHz,  $\pm 4\%$
- Minimum Transmit Sensitivity at Best Transmit Frequency:** 106 dB, 1  $\mu\text{Pa/V}$  at 1 m
- Minimum Receive Sensitivity at Best Receive Frequency:** -162 dB re 1V/ $\mu\text{Pa}$
- Minimum Parallel Resistance:** 450  $\Omega$ ,  $\pm 30\%$
- Minimum and Maximum Sensing Range\*:** 30 cm to 15 m
- Typical Sensing Range:** 35 cm to 10 m
- Free (1 kHz) Capacitance:** 5,700 pF,  $\pm 500$  pF
- Beamwidth (@ -3 dB Full Angle):** 12°,  $\pm 2^\circ$
- Maximum Driving Voltage (2% Duty Cycle Tone Burst):** 1,500 V<sub>pp</sub>
- Operating Temperature:** -40°C to 90°C
- Weight:** 160 g
- Housing Material:** Glass filled polyester
- Acoustic Window:** Glass reinforced epoxy

\*Pulse-Echo Mode. Minimum and maximum ranges are best case scenarios. Actual range may vary, depending on drive circuitry and signal processing.

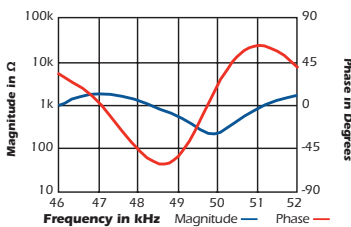
### Directivity Pattern



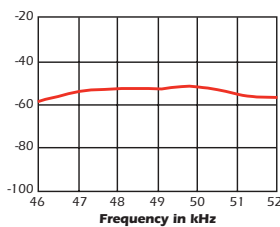
### Transmit & Receive Voltage Response



### Impedance Magnitude & Phase



### Figure of Merit (Sum of TVR & RVR)



## 50 kHz

AIRDUCER® Ultrasonic Transducer

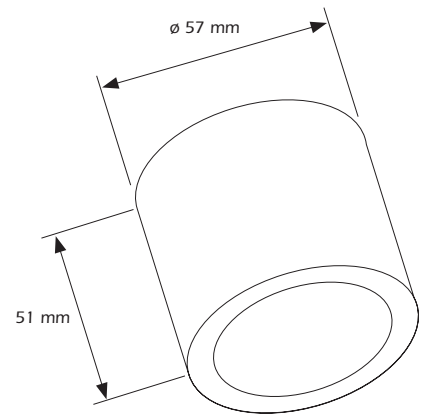
### Applications

- Level measurement
- Open channel flow
- Proximity
- Obstacle avoidance
- Robotics

### Features

- Rugged sealed construction
- Cylindrical design allows for installation in various applications

### Dimensions



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AT50\_rF 04/13/09

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