

# ATK50

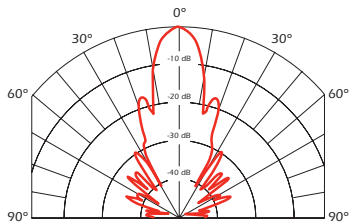


## SPECIFICATIONS

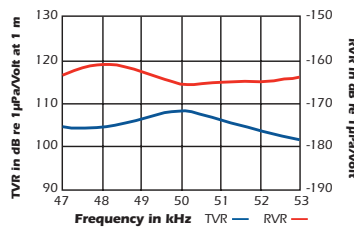
**Best Operating Frequency:** 50 kHz,  $\pm 4\%$   
**Minimum Transmit Sensitivity at Best Transmit Frequency:** 105 dB, 1  $\mu\text{Pa/V}$  at 1 m  
**Minimum Receive Sensitivity at Best Receive Frequency:** -170 dB re 1V/ $\mu\text{Pa}$   
**Minimum Parallel Resistance:** 350  $\Omega$ ,  $\pm 30\%$   
**Minimum and Maximum Sensing Range\*:** 30 cm to 15 m  
**Typical Sensing Range:** 35 cm to 10 m  
**Free (1 kHz) Capacitance:** 5,000 pF,  $\pm 100$  pF  
**Beamwidth (@ -3 dB Full Angle):** 10°,  $\pm 2^\circ$   
**Maximum Driving Voltage (2% Duty Cycle Tone Burst):** 1,000 V<sub>pp</sub>  
**Operating Temperature:** -40°C to 90°C  
**Weight:** 190 g  
**Housing Material:** PVDF  
**Acoustic Window:** PVDF

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

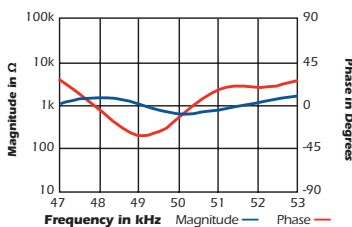
### Directivity Pattern



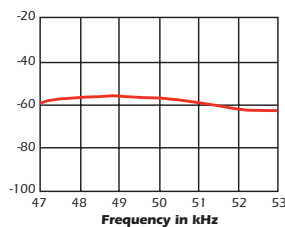
### Transmit & Receive Voltage Response



### Impedance Magnitude & Phase



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



## 50 kHz

AIRDUCER® Ultrasonic Transducer

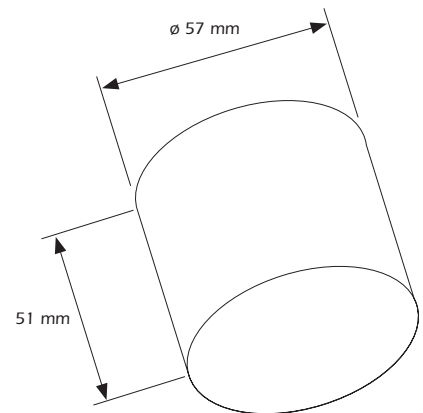
### Applications

- Level measurement in caustic environments
- Proximity
- Obstacle avoidance
- Robotics

### Features

- Rugged one-piece PVDF housing
- Ideal for chemically aggressive environments
- Cylindrical design allows for installation in various applications

### Dimensions



©Airmar Technology Corporation

ATK50\_rF 04/13/09

As Airmar constantly improves its products, all specifications are subject to change without notice. All specifications typical at 22°C. AIRDUCER® is a registered trademark of Airmar Technology Corporation. Other company or product names mentioned in this document may be trademarks or registered trademarks of their respective companies, which are not