AIRMAR® TECHNOLOGY CORPORATION

Ultrasonic Air Transducer
Technical Data Sheet

Airmar ultrasonic transducers deliver the highest level of performance in the most challenging environments and they are the key component for our customers success and their applications. Our precision tuned air-ranging transducers are tried and true performers, even when used for difficult tasks. American-made from the highest quality materials, Airmar's ultrasonic transducers provide reliable, long-lasting excellence to any measurement system.

AT225

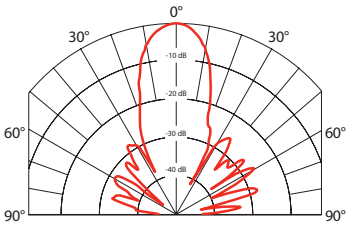
SPECIFICATIONS

Best Operating Frequency: 228 kHz, ±4%
Minimum Transmit Sensitivity at Best Transmit Frequency: 101 dB re 1µPa/V at 1 m
Minimum Receive Sensitivity at Best Receive Freq.: -180 dB re 1V/µPa
Minimum Parallel Resistance: 400 Ω, ±30%
Minimum and Maximum Sensing Range*: 8 cm to 2.5 m
Typical Sensing Range: 10 cm to 1.5 m
Free (1 kHz) Capacitance: 450 pF, ±20% pF
Beamwidth (@ -3 dB Full Angle): 15°, ±2°
Maximum Driving Voltage (2% Duty Cycle Tone Burst): 500 V_{pp}
Operating Temperature: -40°C to 90°C
Weight: 4 g
Housing Material: Glass filled polyester
Acoustic Window: Glass reinforced epoxy

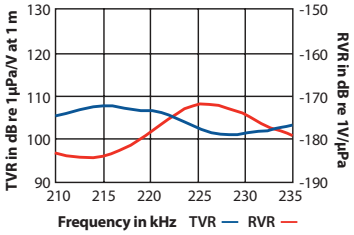
***Pulse-Echo Mode:** Minimum and maximum ranges are best case scenarios. Actual range may vary, depending on drive circuitry and signal processing.

Note: Optimally, performance measurements should be taken when the transducer reaches a steady state.

Directivity Pattern



Transmit & Receive Voltage Response



Impedance Magnitude & Phase

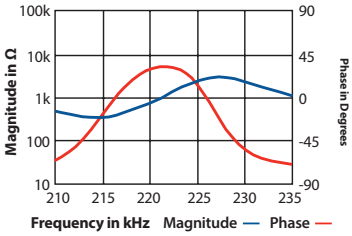
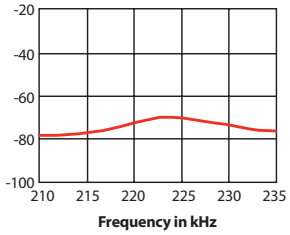


Figure of Merit (Sum of TVR & RVR)



228 kHz
AIRDUCER® Ultrasonic Transducer

Applications

- Level measurement
- Automation control
- Proximity
- Obstacle avoidance
- Robotics
- Flow

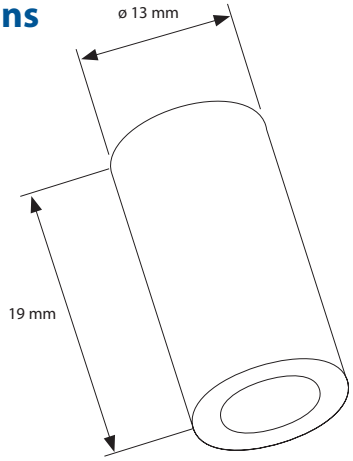
Features

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

Options

- Optional circuit board mounting pins
- 2 wire version is standard. Also available with coaxial cable.

Dimensions



Additional Resources

Theory of Operations

Applying Ultrasonic Technology

T1 Developer Board

Airmar's T1 Developer's Transceiver Module can be used for evaluation of AIRDUCER® Transducers.

RoHS COMPLIANT ISO CERTIFIED **www.airmar.com**