

### ARK41

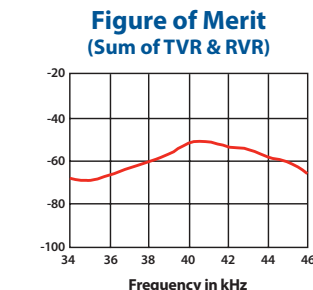
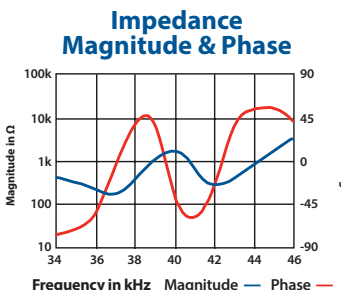
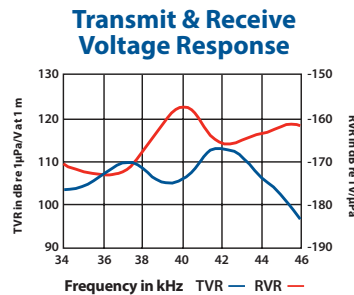
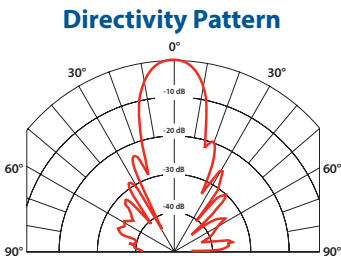


#### SPECIFICATIONS

**Best Operating Frequency:** 41 kHz,  $\pm 4\%$   
**Minimum Transmit Sensitivity at Best Transmit Frequency:**  
 108 dB re 1  $\mu$ Pa/V at 1 m  
**Minimum Receive Sensitivity at Best Receive Frequency:** -175 dB  
 re 1 V/ $\mu$ Pa  
**Minimum Parallel Resistance:** 200  $\Omega$ ,  $\pm 30\%$   
**Minimum and Maximum Sensing Range\*:** 30 cm to 20 m  
**Typical Sensing Range:** 35 cm to 15 m  
**Free (1 kHz) Capacitance:** 5,000 pF,  $\pm 20\%$  pF  
**Beamwidth (@ -3 dB Full Angle):** 14°,  $\pm 2^\circ$   
**Maximum Driving Voltage (2% Duty Cycle Tone Burst):** 1,800 V<sub>pp</sub>  
**Operating Temperature:** -40°C to 90°C  
**Weight:** 560 g  
**Housing Material:** Kynar® 720  
**Acoustic Window:** Kynar® 720

\*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.



### 41 kHz

#### AIRDUCER® Ultrasonic Transducer

#### Applications

- Level measurement in chemically aggressive environments
- Food and beverage processing
- Flow monitoring

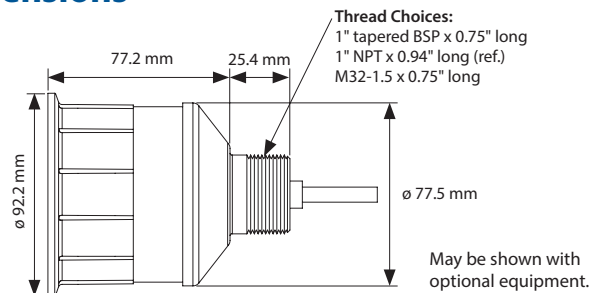
#### Features

- Rugged one-piece PVDF housing is U.S. FDA compliant
- Housing design will accommodate transceiver and signal processing electronics
- Standard internal shielding

#### Options

- Cable length can be customized
- 10 K $\Omega$  thermistor available for temperature compensation
- Mounting caps available in BSP, NPT, or M32 threads
- Available in alternate housing material (AR41)

#### 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.