

SonoTube 008/D13 COMMUNICATIONS TRANSDUCER



Typical Uses: Underwater Wireless Communication Applications, Underwater Positioning and Navigation Applications, Underwater Telephones & Acoustic Reference Standards

FEATURES

The SonoTube 008/D13 is a low frequency high power transmitter and receiver transducer active over 7-16kHz. It is operational to full ocean depth thanks to the oil filled rubber encapsulated design. It is particularly useful in systems for underwater communications and positioning and navigation.

The SonoTube 008/D13 is designed to be fixed to telemetry units, pressure vessels etc. and a connection can be made via glass to metal seal.



ADVANTAGES

- Rated to Full Ocean Depth
- Long-term stability
- Durable and reliable construction
- Low Frequency High Power Transmitter and Receiver

ORDER NUMBER

CTG 0052-0001

Please specify any additional cable, alternative connectors and/or calibration requirements with order

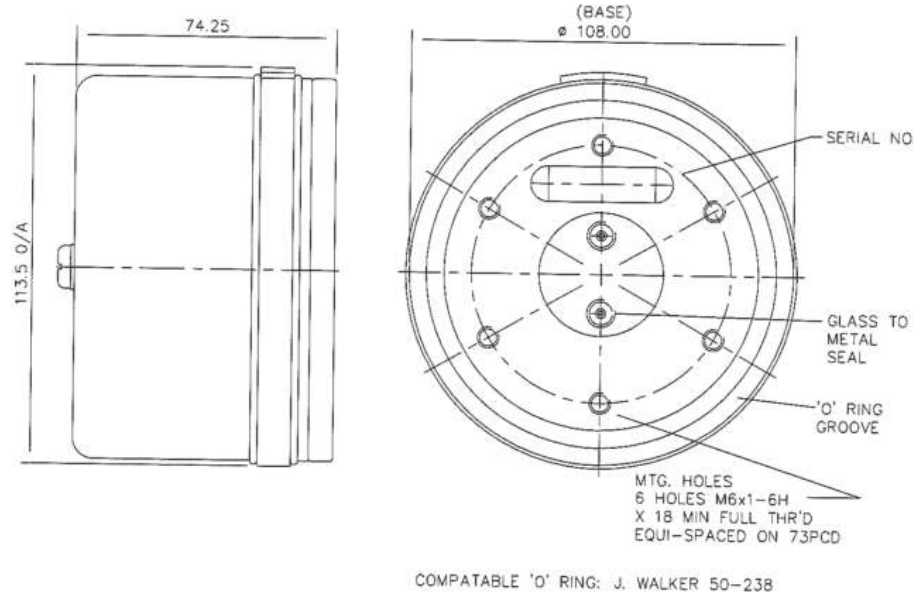
TECHNICAL SPECIFICATION

Nominal resonant frequency	8.5 & 13 kHz
Integral Amplifier or Tuning Element	No
Receive Sensitivity @ 8.6kHz	- 178 dB re 1V/ μ Pa
Recommended receive frequency range	7-16 kHz
Linear frequency range	N/a
Maximum acoustic input @8.6kHz	+ 238 dB re 1 μ Pa
Transmit sensitivity @ 12.6 kHz	+ 134 dB re 1 μ Pa/V at 1m
-3dB bandwidth	4.6 kHz
Quality Factor	2.7
Recommended transmit frequency range	7-16 KHz
Maximum source level @ 12.6 kHz	+ 194 dB re 1 μ Pa at 1m
Maximum applied voltage	1000 Vrms
Low Frequency capacitance (@ 1kHz)	14 nF
Horizontal beam pattern	Omni-directional +/- 2 dB at 10kHz
Vertical beam pattern	> 270°

MECHANICAL SPECIFICATION

Dimensions	Maximum outer diameter 115 mm, Length 75 mm
Transducer head weight in air	Approximately 1.8kg
Transducer head weight in water	Approximately 1 kg
Maximum recommended operating depth	Rated to full ocean depth
Survival depth	Rated to full ocean depth
Operating temperature range	-5 to +35°C
Cable	None as standard
Connector	N/a
Mounting	To be fixed to telemetry / pressure vessel etc.

MECHANICAL DRAWING

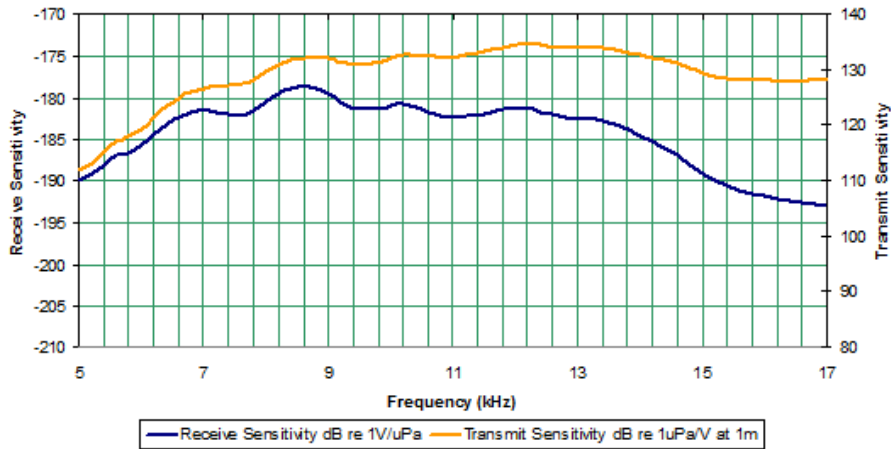


CONNECTOR LAYOUT

N/A

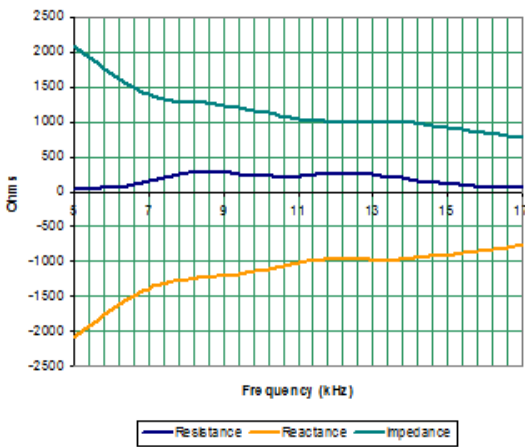
SENSITIVITY

SonoTube 008/D13 Sensitivity



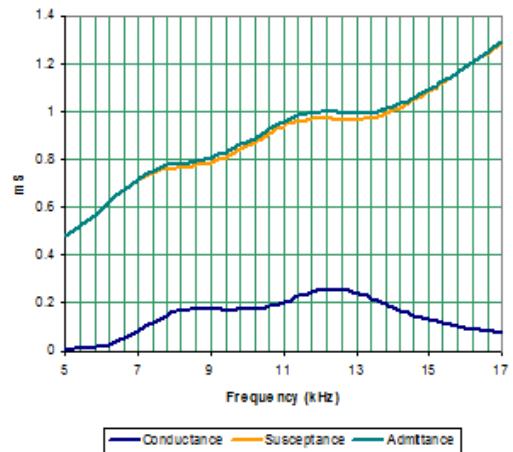
IMPEDANCE

SonoTube 008/D13 Impedance



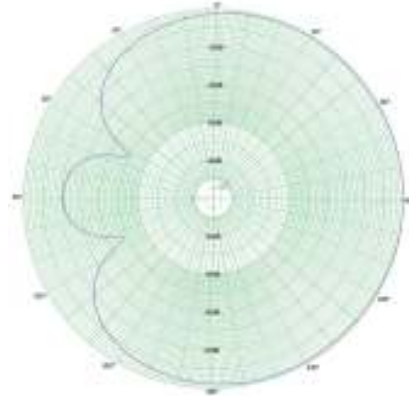
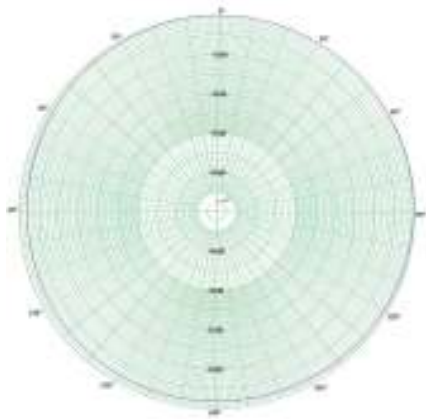
ADMITTANCE

SonoTube 008/D13 Admittance



HORIZONTAL BEAM PATTERN @ 10kHz

VERTICAL BEAM PATTERN @ 10kHz



VARIATIONS

The SonoTube 008/D13 – UW variation includes an LPMBH-4 Underwater connector and protective cage.

The SonoTube 008/D13 – DT is also available as the SonoTube 008/D13 unit as a dunking transducer including a protective cage and a cable for easy deployment.



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