

SonoTube 008/D13-UW COMMUNICATIONS TRANSDUCERS



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



FEATURES

The SonoTube 008/D13-UW 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-UW is designed to be fixed to telemetry units, pressure vessels etc. and a connection can be made via the underwater connector. The SonoTube 008/D13-UW also boasts a protective cage to provide excellent durability against knocks.

ADVANTAGES

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

ORDER NUMBER

CTG 0052-0010

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 @ 8.9kHz	- 175 dB re 1V/ μ Pa
Recommended receive frequency range	7-16 kHz
Linear frequency range	N/a
Maximum acoustic input @ 8.9kHz	+ 229 dB re 1 μ Pa
Transmit sensitivity @ 8.7 kHz	+ 135 dB re 1 μ Pa/V at 1m
-3dB bandwidth	2.2 kHz
Quality Factor	3.9
Recommended transmit frequency range	7-16 KHz
Maximum source level @ 8.7kHz	+ 189 dB re 1 μ Pa at 1m
Maximum applied voltage	530 Vrms
Low Frequency capacitance (@ 1kHz)	13 nF
Horizontal beam pattern	Omni-directional +/- 2 dB at 10kHz
Vertical beam pattern	> 270°

MECHANICAL SPECIFICATION

Dimensions	***
Transducer head weight in air	***
Transducer head weight in water	***
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	LPMBH-4M
Mounting	To be fixed to telemetry / pressure vessel etc.

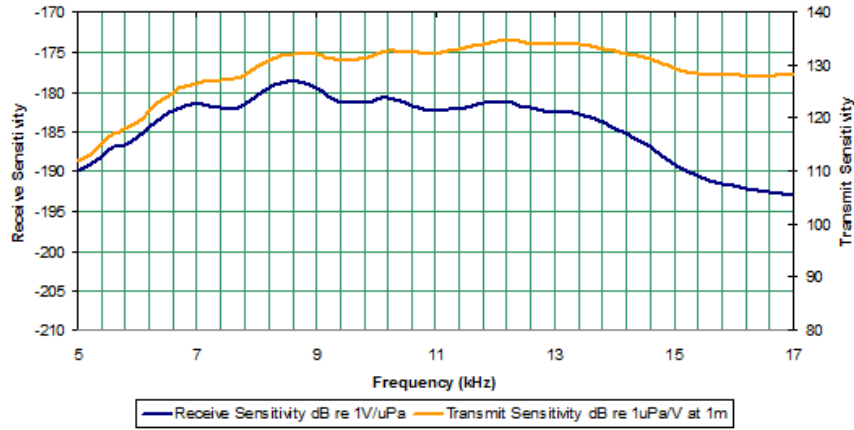
MECHANICAL DRAWING

CONNECTOR LAYOUT

Pin	Signal name
1	- Signal
2	+ Signal
3	N/a
4	N/a

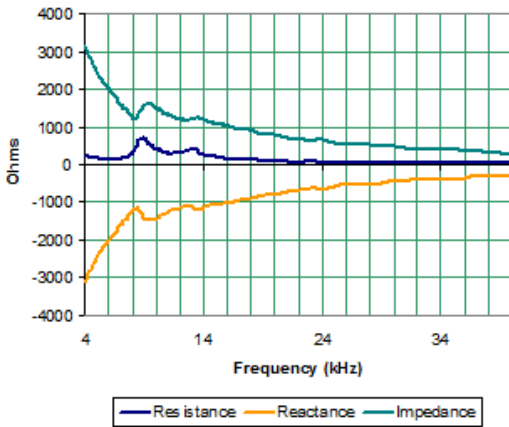
SENSITIVITY

SonoTube 008/D13 Sensitivity



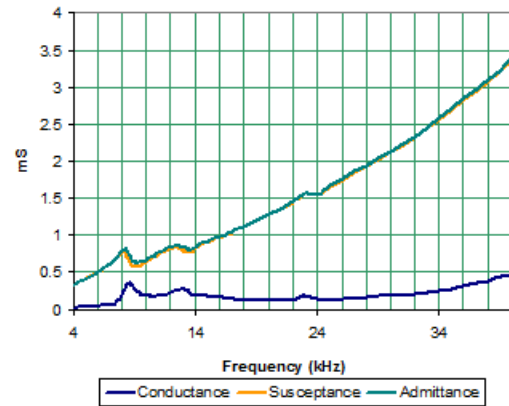
IMPEDANCE

SonoTube 008/D13 Impedance



ADMITTANCE

SonoTube 008/D13 Admittance



HORIZONTAL BEAM PATTERN

VERTICAL BEAM PATTERN

VARIATIONS

The SonoTube 008/D13 is the standard version of this transducer.

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.



Chelsea
Technologies
Group Ltd

55 Central Avenue
West Molesey
Surrey KT8 2QZ
United Kingdom
Tel: +44 (0)20 8481 9000
Fax: +44 (0)20 8941 9319
sales@chelsea.co.uk
www.chelsea.co.uk

*** Please contact CTG for further information

In view of our policy of continual improvement, the designs and specifications of our products may vary from those described 2271-034-RS-A)