

SonoTube 008/D12-PA-DT

COMMUNICATIONS PRE-AMPLIFIED DUNKING-TRANSDUCER



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

FEATURES

The SonoTube 008/D12-PA-DT is a low frequency, broadband, pre-amplified, dunking 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/D12-DT is designed as a dunking transducer for easy deployment. The SonoTube 008/D12-DT also boasts a protective cage to provide excellent durability against knocks.

ADVANTAGES

- Excellent Receive Sensitivity
- Long-term stability
- Durable and reliable construction
- Low Frequency High Power Transmitter and Receiver

ORDER NUMBER

CTG 2213-001-PL

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

TECHNICAL SPECIFICATION

Nominal resonant frequency	8 & 12.5 kHz
Integral Amplifier or Tuning Element	Yes
Receive Sensitivity @ 13 kHz	- 148 dB re 1V/ μ Pa
Recommended receive frequency range	6-17 KHz
Linear frequency range	N/a
Maximum acoustic input @13 kHz	+ 168 dB re 1 μ Pa
Power Supply	20 – 30 V
Maximum current consumption	10 mA (with 30V supply)
Maximum output voltage	10 Vrms
Transmit sensitivity @ 13 kHz	+ 138 dB re 1 μ Pa/V at 1m
-3dB bandwidth	6 KHz
Quality Factor	2.2
Recommended transmit frequency range	6-20 KHz
Maximum source level @ 13 kHz	+ 189 dB re 1 μ Pa at 1m
Maximum applied voltage	350 Vrms
Low Frequency capacitance (@ 1kHz)	11.5 nF
Horizontal beam pattern	Omni-directional
Vertical beam pattern	> 270°

MECHANICAL SPECIFICATION

Dimensions	***
Transducer head weight in air	***
Transducer head weight in water	***
Maximum recommended operating depth	200m
Survival depth	400m
Operating temperature range	-5 to +35°C
Cable	5m triple screened twisted pair cable
Connector	MCIL-6M
Mounting	Dunking

MECHANICAL DRAWING

CONNECTOR LAYOUT

Pin	Signal Name
1	- Power
2	+ Transmit
3	+ Power
4	+ Receive
5	- Transmit
6	- Receive

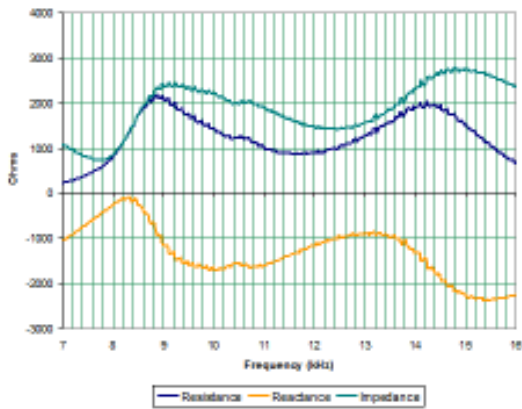
SENSITIVITY

SonoTube 008/D13-DT-PA Sensitivity



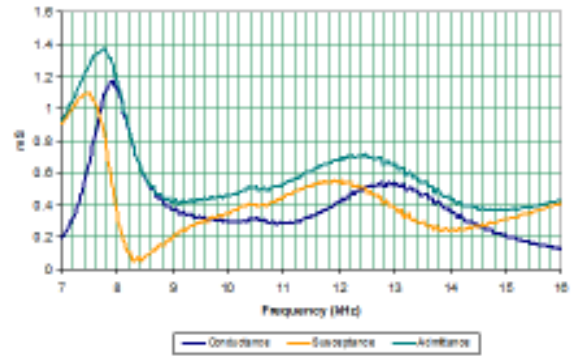
IMPEDANCE

SonoTube 008/D13-PA-DT Impedance



ADMITTANCE

SonoTube 008/D13-PA-DT Admittance



HORIZONTAL BEAM PATTERN

VERTICAL BEAM PATTERN

VARIATIONS

The SonoTube 008/D12 is the standard basic model of this transducer without pre-amplifier.

The SonoTube 008/D12 – UW variation includes a LMPBH-4MP Underwater connector without the integral pre-amplifier.

The SonoTube 008/D12 – DT is also available as the SonoTube 008/D12 as a dunking transducer without the integral pre-amplifier.



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 2271-033-RS-A)