

DualSense 080 SPHERICAL HYDROPHONE



Typical Uses: Calibration reference standard, Marine Mammal and Environmental Noise Measurements



FEATURES

The DualSense 080 transducer is a horizontally omni-directional, spherical, reciprocal transducer operational over a wide frequency range (10Hz – 125kHz). It is useful for making absolute sound measurements. This transducer is made with a softer ceramic making it ideal for hydrophone applications, but due to the DualSense 080's reciprocal nature the transducer is equally useable as a projector.

The DualSense series are highly reliable transducers and come in a protective, durable polyurethane coating.

ADVANTAGES

- Horizontally omni-directional
- Long-term stability
- Versatile
- Durable and reliable construction

ORDER NUMBER

CTG 0708-0001

Please specify any alternative cable, connector and/or calibration requirements with order.

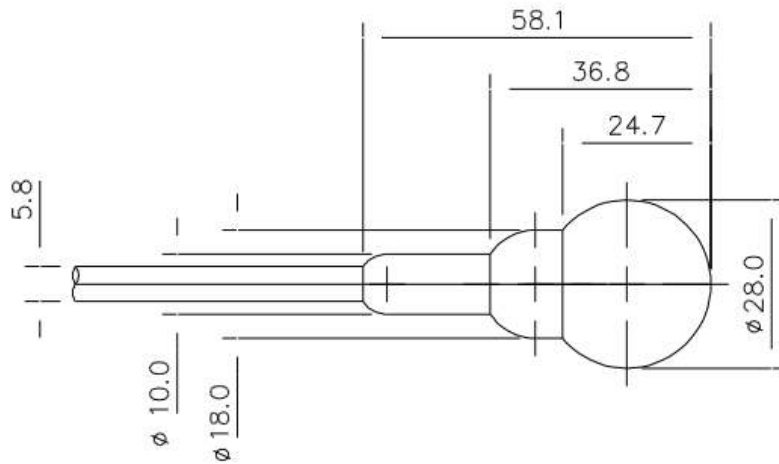
TECHNICAL SPECIFICATION

Nominal resonant frequency	80 kHz
Integral pre-amplifier or tuning element	No
Receive sensitivity @ 95kHz	-197dB re 1V/ μ Pa
Recommended receive frequency range	10Hz – 125kHz
Linear frequency range	10Hz – 50kHz
Maximum acoustic input @ 95kHz	+249 dB re 1 μ Pa
Transmit Sensitivity @ 80kHz	+152 dB re 1 μ Pa/V at 1m
-3dB bandwidth	13kHz
Quality Factor (3dB)	5.8
Recommended transmit frequency range	40kHz – 90kHz
Maximum source level @ 80kHz	+204dB dB re 1 μ Pa at 1m
Maximum applied voltage at resonance	420Vrms
Low frequency capacitance (@ 1kHz)	15nF
Horizontal Beam Pattern	Omni-directional +/- 1dB at 20kHz
Vertical Beam Pattern	> 270 degrees

MECHANICAL SPECIFICATION

Dimensions	Maximum outer diameter 28mm, Length 60mm
Transducer head weight in air	Approximately 40g
Transducer head weight in water	Approximately 25g
Maximum recommended operating depth	1,000 m
Survival depth	2,000 m
Operating temperature range	-2 to +35°C
Cable	5m screened, twisted pair cable
Connector	Bare ends, or customer specified
Mounting	Dunking

MECHANICAL DRAWING

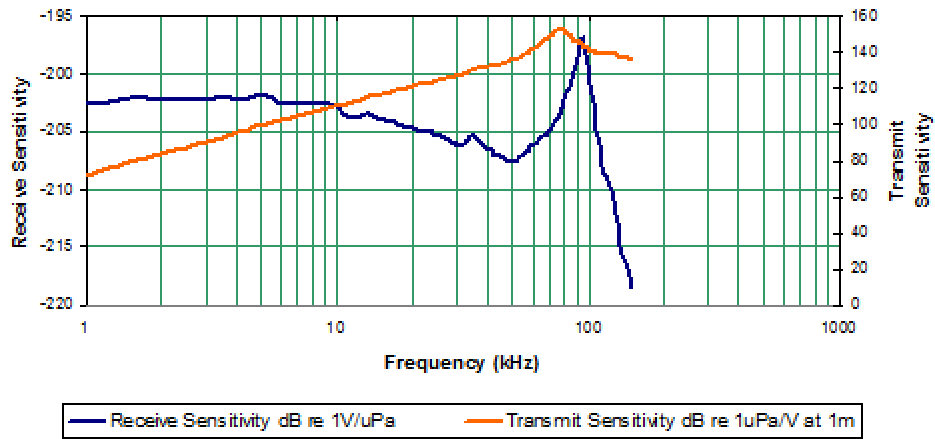


CONNECTOR LAYOUT

Not Applicable

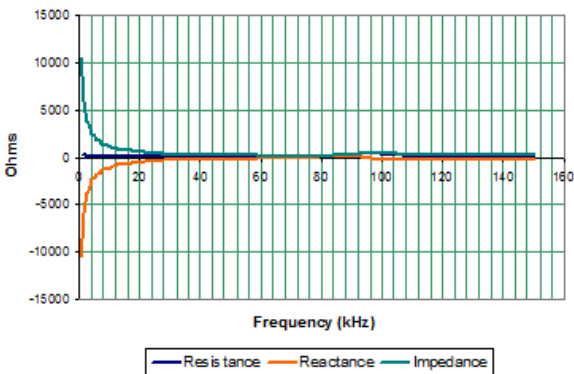
SENSITIVITY

DualSense 080 Sensitivity



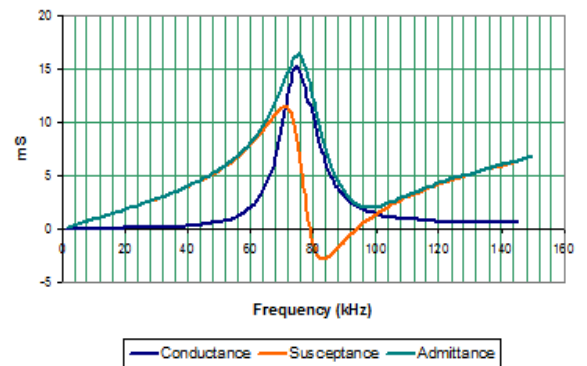
IMPEDANCE

DualSense 080 Impedance

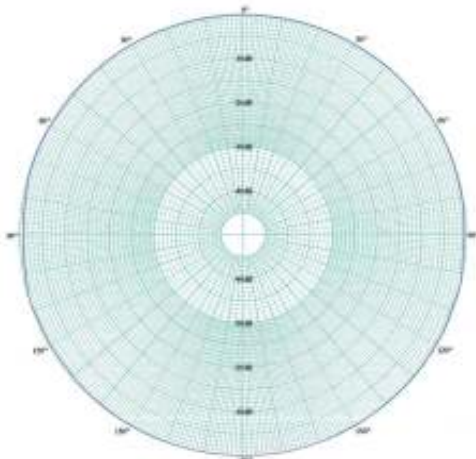


ADMITTANCE

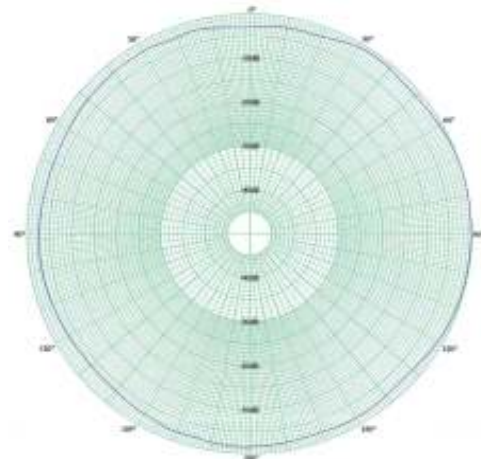
DualSense 080 Admittance



HORIZONTAL BEAM PATTERN @ 20kHz



VERTICAL BEAM PATTERN @ 20kHz



VARIATIONS

The HydroSense 080/45 is available as a 80kHz resonant frequency spherical hydrophone with a 45dB gain integral pre-amplifier.



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