

DualSense 012 SPHERICAL PROJECTOR



Typical Uses: Acoustic Reference Standard, High Power Sound Source, Underwater Communication Applications

FEATURES



The DualSense 012 transducer is a horizontally omni-directional, spherical, reciprocal transducer. It is useful in applications requiring low frequency acoustic source references. This transducer is made with a harder ceramic making it ideal for transmitting applications.

The DualSense series are highly reliable transducers and the DualSense 012 comes in a robust and durable bulkhead mounted housing.

ADVANTAGES

- Horizontally omni-directional
- Long-term stability
- Durable and reliable construction
- Low Frequency Acoustic Source

ORDER NUMBER

CTG 1273-0011

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

TECHNICAL SPECIFICATION

Nominal resonant frequency	12.5 kHz
Integral Amplifier or Tuning Element	No
Receive Sensitivity @ 14.5kHz	- 183 dB re 1V/ μ Pa
Recommended receive frequency range	10Hz – 20kHz
Linear frequency range	N/a
Maximum acoustic input @14.5kHz	+ 237 dB re 1 μ Pa
Transmit sensitivity @ 12.4 kHz	+ 147 dB re 1 μ Pa/V at 1m
-3dB bandwidth	3.5kHz
Quality Factor	3.5
Recommended transmit frequency range	7 –20 kHz
Maximum source level @ 12.4kHz	+ 201 dB re 1 μ Pa at 1m
Maximum applied voltage at resonance	530 Vrms
Low Frequency capacitance (@ 1kHz)	63 nF
Horizontal beam pattern	Omni-directional +/- 2dB at 10kHz
Vertical beam pattern	Hemispherical +/- 4dB at 5kHz

MECHANICAL SPECIFICATION

Dimensions	Maximum outer diameter 248 mm length 336 mm
Transducer mass in air	Approximately 20kg
Transducer mass in water	Approximately 4kg
Maximum recommended operating depth	600 m
Survival depth	1,200 m
Operating temperature range	-5 to +35°C
Cable	None as standard
Connector	LPMBH-6-M Connector
Mounting	Bulkhead mounting

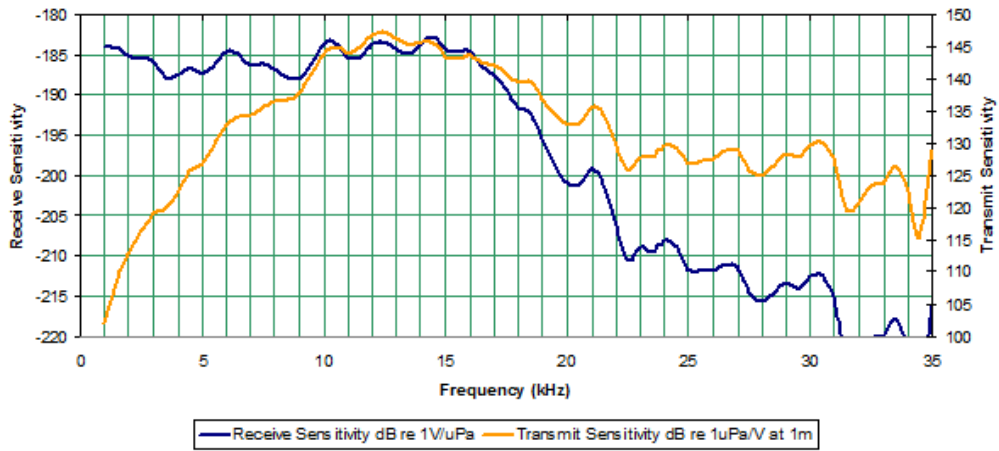
MECHANICAL DRAWING

CONNECTOR LAYOUT

Pin	Signal Name
1	+Signal
2	-Signal
3	Ground
4	N/a
5	N/a
6	N/a

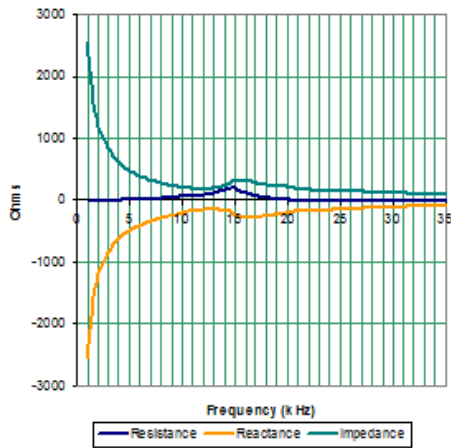
SENSITIVITY

DualSense 012 Sensitivity



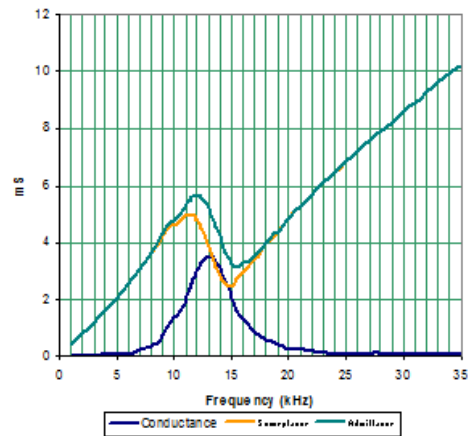
IMPEDANCE

DualSense 012 Impedance



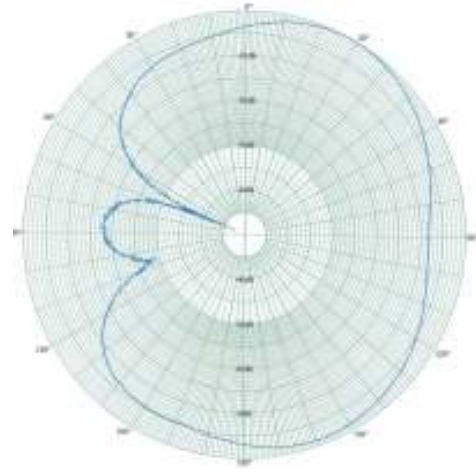
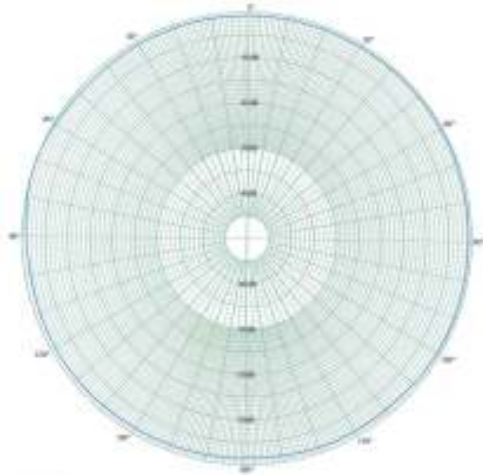
ADMITTANCE

DualSense 12 Admittance



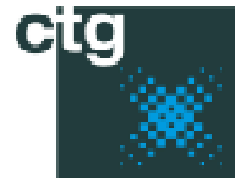
HORIZONTAL BEAM PATTERN @ 10kHz

VERTICAL BEAM PATTERN @ 5kHz



VARIATIONS

BroadBand 012 is also available as a broadband tuned projector with a resonant frequency of 12kHz



*** Please contact CTG for more information
In view of our policy of continual improvement, the designs and specifications of our products may vary from those described 2271-013-RS-A)

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